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ABSTRACT

This proceedings report presents forum presentations, transcripts from question and answer sessions, and remarks made at the national presidents invitational forum on outreach which address the capacity of individual leaders at institutions of higher education to embrace fundamental shifts in beliefs and values about leaders, about the process of leading, about people, and about the outcomes for leadership that fit rapidly changing organizations in a rapidly changing world. Presentations are organized into four phases of change: (1) awareness-analysis (the understanding that change has or is occurring and examining how it is to be met); (2) alternatives (providing leadership in evaluating and finding solutions); (3) decision-transition (the leadership needed during these critical phases of change); and (4) action (includes a sampling of model outreach programs). Presentations and their authors were as follows: "On Learning and Transformation" (Jerold Apps); "Challenge" (Bryce Jordan); "Perspective" (William Schreyer); "Competitiveness" (William Kolberg); "Health" (Roger Bulger); "Environment" (Dolores Spikes); "Washington, What Now?" (Charles McDowell); Commitment" (Carol Cartwright); and "NELD and the Art of White Water Rafting" (C. Peter Magrath). A list of participants is provided. (GLR)

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PROCEEDINGS FROM THE NATIONAL PRESIDENTS' INVITATIONAL FORUM ON OUTREACH

Hyatt Regency Hotel—La Jolla, California
Sunday, February 28–Tuesday, March 2, 1993

"Leadership, thoughtful and skilled, is critical to influence the course of change in our increasingly complex world.'

The National Presidents' Invitational Forum on Outreach was sponsored by the National Extension Leadership Development program. NELD is a joint program of the National Cooperative Extension System, the University of Wisconsin–Extension, and the W.K. Kellogg Foundation. It is based at the University of Wisconsin–Extension in Madison, Wisconsin, through December, 1993.

PROLOGUE

ON LEARNING AND TRANSFORMATION

by Dr. Jerry Apps, NELD National Coordinator

In a very real sense what we have done in the National Extension Leadership Development Program (NELD) is continually evolving. It is beginning to help us to grow, to analyze, to reflect, to understand, and to take action. And then to start the entire process all over again. As personal and individual as it is collective and institutional, the NELD experience has demonstrated to everyone associated with it how truly transforming education and learning can be.

So it was, too, with the NELD National Presidents' Invitational Forum held last March at the Hyatt Regency in La Jolla, California. Perhaps it was the comfortable California weather or the hospitable Hyatt surroundings or the presence of the 70 NELD interns — whatever it was, the Forum was another NELD "teachable moment" where leadership in general, and Extension leadership in particular, took a giant leap forward.

I attribute this not only to the astute conference planners and the excellent presentations, but I believe it has to do with the personal commitment of the men and women of the land-grant institutions who came to La Jolla to challenge themselves to learn and to reinvent themselves as higher education leaders. In fact, the special chemistry that was the La Jolla Forum was as evident in the halls and in the dining rooms and during coffee breaks as it was during the presentations. That was, I think, because the participants were willing to listen, were willing to be challenged, were willing to reflect and to evaluate and to dialogue. In short, they were willing to become Next Age leaders.

In truth, the National Presidents' Invitational Forum was about what NELD is about — the capacity of individuals to embrace fundamental shifts in beliefs and values about leaders, about the process of leading, about people, and about the outcomes for leadership that fit rapidly changing organizations in a rapidly changing world. Embedded in the process of becoming this type of Next Age leader is transformation. And what took place in La Jolla last March — and continues to occur in our land-grant institutions today and will go on happening tomorrow — is part of the process of transformation.

As I see it, the transformation process is comprised of the following phases, some of which were evident during the Forum: 1) Awareness-analysis; 2) Alterna-

tives; 3) Decision-transition; and 4) Action.

Awareness-Analysis

Most, if not all, of the Forum participants came to La Jolla armed with a sense of awareness. Nevertheless, the provocative presentations certainly added to their awareness and enabled them to actively explore creative alternatives. Transformation can't occur unless you are aware that something needs changing, that something needs transforming. The Forum speakers helped us to realize that we need to become more aware of what's changing around us and how we, in turn, should be meeting this challenge of change.

The analysis part of transformation includes analyzing carefully your situation and the context in which you operate. Context is an important principle of Next Age Leadership, and all university administrators work in a particular context. Their leadership approach, in some measure, must be a reflection of this context.

Alternatives

Once we are clearly aware that something is wrong, that we can't blame someone or something for it, that some quick fix won't correct it, and that it seems not to go away when we ignore it, we are ready to move to the alternatives phase of the process.

During this phase in La Jolla, we listened, we discussed, and, on occasion, we took issue with our presenters. We also talked with our colleagues, some of whom have developed leadership approaches that work well in the thickets of change.

As we listened and talked and reflected on the various leadership challenges presented, some of us found ourselves back at the awareness-analysis phase of the process. Using the presentations as mirrors, we developed yet another awareness of who we are as leaders, and as persons.

Decision-Transition

During this phase of transformation, we begin to make decisions about how we want to change. After an examination of ourselves, our contexts, our alternatives, and our leadership approaches, we also reflect and evaluate — and begin to experience transition. Transition, then, becomes the heart of the transformation process. After the Forum, we worked through the transition phase by reflecting on the Forum as a pivotal learning experience, or as a kind of reinvention of our roles as leaders. With transition comes a reaffirmation of old beliefs, values, and ideas about leadership; an acceptance and integration of new ones; and a discarding of obsolete ones. For many, this began in La Jolla last March.

Action

If the Forum had only been about last March, about La Jolla, about a particular place and time, transformation would not be occurring. Change would not be taking place. But the National Presidents' Invitational Forum was a part of a process that is still going on, and it is best reflected in the actions that individuals, academic departments, colleges, and universities are taking. New ideas are being tried out, new partnerships

are being formed, and new approaches to leadership are being applied. In some cases these take the form of model programs. In others, they are exemplified by university leaders reinventing university leadership. In all instances, they underscore the fact that without action and movement, there is no transformation; there is no change.

Undoubtedly, the National Presidents' Invitational Forum was/is about more than just transformation. But the transformation process is at the heart of higher education's ability to become a vital part of society in the 21st century. This process started before the La Jolla Forum and will continue well beyond it. But it secured much of its spark and impetus from the events of February 28-March 2, 1993.

I invite you to read these Forum Proceedings and to become a part of this learning experience — and to "transform" yourself in the process.

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Dr. Jerold Apps, National Coordinator,
National Extension Leadership Development (NELD) Program

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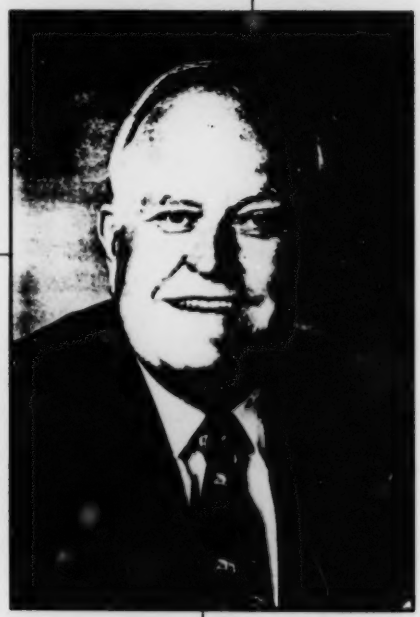
REMARKS BY

BRYCE JORDAN
PRESIDENT EMERITUS THE PENNSYLVANIA STATE UNIVERSITY



CRISIS AND OPPORTUNITY IN HIGHER EDUCATION

The subject we have at hand is of great currency, evidenced by much of the media criticism given to higher education, particularly large research universities. It is also evidenced by the nature and number of those who have accepted the invitation to be here. We have members of governing boards; chancellors, presidents and their senior colleagues; and representatives of the worlds of business, industry, government, and foundations.

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There is a sense of prevailing crisis among most of us in the field of higher education. This is, of course, nothing new. From at least 1946, presidents, chancellors, and their staffs have had to become crisis managers. The likelihood is remote that we can (or should) return to the time when the job was primarily one requiring gentility, eloquence, and an inspirational, or philosophical, bent. Those traits still serve a chief executive officer and his or her university well; but much more is required. That became particularly true immediately after World War II and continues to be even more so today.

Still, there was a happy crisis in the heady times of optimism from 1946 to 1966. In 1957, there was the challenging crisis of the Sputnik era, and there was the tragic period that began in 1964 at Saither Gate in Berkeley. Our universities have experienced the glare of the public spotlight and a series of crises—some happy, some sad—over the past 45 years.

Today, crises of varying importance occupy much of our attention—the problems brought on by a lack of ethnic and gender equity on our campuses; the difficulty of protecting free speech in the university environment; the "teaching versus research" controversy; the protests against increased tuition; the animal rights movement; the cost of library materials; and the severe funding problems that have gradually enveloped much of higher education.

The issue that has brought us together here is one of an opportunity to seek, find, and implement ways of better serving the society in which we live. However, that opportunity resides in what I believe to be another major crisis for higher educa-

Fred Humphries (center) greets his fellow participants

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tion — a crisis of public confidence.

That crisis of public confidence began with the events of 1964 and has since broadened. It manifests itself in the nature of the attention colleges and universities receive from the media, and in the highly audible criticism we hear and read about from students, parents, the corporate world, the public at large, and from elected and appointed federal and state government officials. (In citing the criticisms we hear and read about, I do not want to give credence to the university-bashing distortions that show up in books by Charles J. Sykes, as well as in articles appearing in various periodicals.)

Our crisis of confidence manifests itself most dramatically in the fact that state appropriations to most of our institutions are not close to the levels we think are necessary to maintain the advancement of our universities in terms of quality and capability.

We don't have the time, or the need, to go through what could easily be a long litany of current situations where faculty purchasing power has declined over a number of years, and where state and federal funding patterns have shown less than great enthusiasm for the value, let alone the essentiality, of what our public research universities do in the fulfillment of their missions. One of the few bright spots in our funding picture is the great success a number of our major public universities are having in raising private gift funds.

It is important to recognize, however, that the funding problems our universities face are exacerbated by the serious fiscal situation of our states and nation, regardless of the extent of a lack of public confidence. But that fact itself raises an interesting and important question: Is the crisis of confidence our universities face such that our constituencies outside of the campus are not willing to argue our case for the funds that are available, or is it that the serious economic conditions of our states and nation are such that our constituents do not believe that our funding situations *can* be ameliorated? I cannot answer that question fully, but I can definitely say for sure that *they don't like us very much o... there.*

NELD intern Phil Rasmussen takes notes

In many cases, the public funds that could be made available to repair our declining facilities, to improve our faculty's purchasing power, to provide additional graduate fellowships, or to keep up with soaring library costs, are likely these days to go to K-12 education, vocational-technical training, prisons, various entitlements, or the needful infrastructures in our states and cities.

So the questions arise. What can our public universities do about this state of affairs? What can university chief executive officers, regents and trustees, or senior administrative officials, do about it? What can we do to convince our various constituencies that our institutions are

directly useful, and essential, for our society? These constituencies are in many cases the decision-makers, or bearers of influence, concerning the funding necessary for the progress of our institutions. We have not let them know that our universities are important to our society and that there is a great deal more we can do to address our country's several societal problems.

As you know, our nation faces pressing problems in the areas of domestic and international economics; ethnic and class conflict; public health, particularly the prevention of illness and maintenance of health; healthcare finance; the growing population of the poor and homeless; the aging of our society; education and training at every level; the continuing problem of drug abuse and its attendant social ills; and crime. The questions these prompt me to raise are: 1) *Can* our public research universities do more in the solution of the serious problems our society faces? and 2) *Should* public universities do more?

This Forum has been organized with the assumption that our public research universities could, and should, do more in the solution of our country's ills. Many people — some inside the academy, more outside the academy — think our universities *should* do more. Opinion outside our universities says we aren't doing the job we should in this regard, and this same opinion has increasingly surfaced *within* our institutions. An occasional land-grant president or dean of agriculture, while suggesting that the "land-grant mission" is too narrowly focused, usually indicates that the broadening of that focus should occur within the colleges of agriculture and the agricultural extension arm of the university.

This Forum aims for a focus beyond the colleges of agriculture and the traditional, agricultural extension activities of the land-grant university. Similar ways of thinking are surfacing elsewhere. C. Peter Magrath, the President of the National Association of State Universities and Land-grant Colleges, has broached the idea in communications from his office and in a paper, "The New Land-grant Model: New Wine in 21st Century Bottles." The Committee on Institutional Cooperation (C.I.C.) has launched the Multi-Dimensional Excellence Project and has issued a first-phase paper titled "Multi-Dimensional Excellence in Support of Multiple University Missions" (Champaign, Illinois, April 27, 1992). Since the membership of the C.I.C. consists of all the members of the Big Ten Athletic Conference, plus the University of Chicago, their effort will have impact.

If there is, indeed, a growing belief that the time has come to reconsider the mission of the public research university with the aim of broadening and deepening its outreach activity, then we should examine the internal conflicts in our institutions that are barriers to an increased outreach posture. Many of these internal conflicts already exist and are, on occasion, the subject of policy debates at various levels of institutional governance.

Our best public research universities rank among the best in the world. A principal component of their reputation has been a very heavy emphasis on research. Important research and publication activity not only enhances a university's reputation, but represents a positive contribution to public good. But most of you will agree, I suspect,

If there is, indeed, a growing belief that the time has come to reconsider the mission of the public research university with the aim of broadening and deepening its outreach activity, then we should examine the internal conflicts in our institutions that are barriers to an increased outreach posture.

that the research activities of our strongest public universities have produced a sizable amount of inconsequential research. If the missions of the universities represented here are altered to allow an increased amount of outreach across the entire institution, there will certainly arise an internal policy conflict, and debate, as to what the appropriate balance between research and service should be.

A second possible source of internal policy conflict and debate is likely to relate to the renewed emphasis on undergraduate teaching. I believe that the undergraduate teaching situation in our major public universities has never been as grim as our most vehement critics have claimed. Most of us would agree that a renewed emphasis on the teaching of undergraduates is highly desirable. Should our public research universities begin to shift fiscal and human resources toward increased outreach activity? Such conflict seems likely because large sums of additional state and federal dollar support will not be forthcoming in the near term and perhaps not for a number of years.

A third internal policy conflict *most* likely to erupt in the face of a major reorientation of our universities has to do with their institutional missions. This potential debate stems from the fact that our standards for faculty appointment, promotion, and tenure will have to be revised if the public research universities undertake a larger outreach role. A sharp division in faculty attitude already exists toward the appointment, promotion and tenuring of traditional agricultural extension faculty, even within our colleges of agriculture. In the traditional faculties of the

Patrick Boyle (right) welcomes his land-grant colleagues

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The traditional disciplines remain disparate, even isolated, on our campuses, making it difficult to obtain agreement on the worth of the academic activities of those whose work is essentially interdisciplinary.

arts and sciences, the attitude toward differing appointment, promotion, and tenure standards for extension, or other public service faculty, has been reflected in a resistance that lies just beneath the surface of faculty governance. On occasion it surfaces at our major public universities and can be expected to grow and produce major policy debate in the event of a broadened approach to outreach of a public service nature.

If there are to be new and different standards for the awarding of merit promotions and pay increases for outreach, the support of the university's entire faculty, including those not primarily involved in outreach, must be sought. These problems are made particularly difficult because in both outreach activity and undergraduate teaching, we need to utilize performance standards that are more difficult to quantify and objectify than is the traditional standard of productivity in research and publications.

A fourth policy difficulty to a broadened delivery of outreach service from our public research universities will result from the call for a great deal of effort to solve our country's most complex societal problems. Such an interdisciplinary effort has always been difficult to achieve and sustain. The traditional disciplines remain disparate, even isolated, on our campuses, making it difficult to obtain agreement on the worth of the academic activities of those whose work is essentially interdisciplinary. Such individuals sometimes have difficulty finding an academic home. With some notable exceptions, faculty attitudes toward interdisciplinarity remain largely conservative.

This event has been organized for the examination of a possible reorientation—perhaps even a massive one—of the mission of the American public research university. The purpose of such a re-orientation would be to focus the outreach activities of the entire university so that it might be enabled to provide a larger portion of direct intervention in the struggle to cure the most pressing societal ills of our nation.

This effort will have to begin with those who are responsible for the organization and management of the university; it must start with the governing board and the chancellor or president to whom that board delegates the authority to implement policy, plus dedication to the idea by senior administrators, deans, department heads and chairs, and the faculty. This means the building of a consensus, which is no small task with institutions passionately dedicated to freedom of thought and open expression. Beyond the president, chancellor, the governing board, and others, the effort must have support from business and industry, government, and the foundations.

Above all, this new direction will call for flexibility and change in terms of management and institutional organization. The rate of societal change, in the United States and throughout the world, is increasing dramatically. Managerial style and institutional organization, in the world of the university as well as in that of business, industry, and government, must remain flexible and subject to change if the needs of our rapidly-changing society are to be met.

It is easier to enunciate the points of view I have expressed than to implement them. Achieving even a small portion of what is needed in the outreach activity of America's public research

universities is a very formidable task. In many ways, our universities, despite the changes going on around them, continue to cling to their traditional ways. Moreover, American higher education has never been very good at communicating with its various constituencies—students, parents, faculty and staff, government, foundations, and its governing boards. This is true whether we are attempting to explain ourselves, communicate the needs of our institutions, or convince our publics of the appropriateness of our actions.

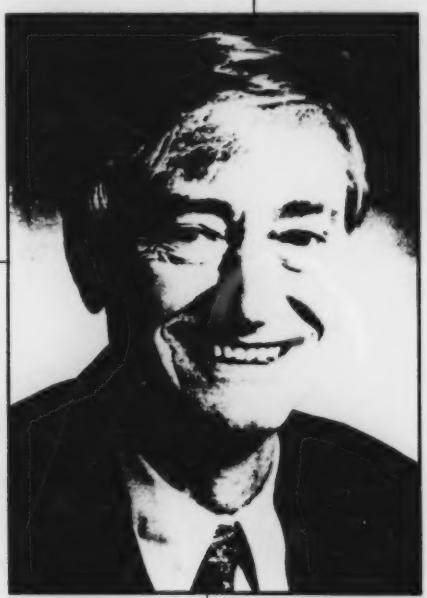
Thus, if any of the goals of this Forum are to be met, it will be necessary for the universities represented here to improve their ability to communicate with their publics, not only as separate institutions, but collectively.

Our public research universities, if they can effect a means of serving society's needs in ways that go far beyond the confines of their traditional extension and outreach activities, may make themselves appear as far more valuable to the American people than is currently the case. In that process, they likely will be taking positive steps toward the alleviation of what is surely a crisis of confidence.

REMARKS BY

WAYNE SCHUTJER

ASSOCIATE DEAN
AND DIRECTOR,
THE PENNSYLVANIA
STATE UNIVERSITY



UNIVERSITIES THAT MATTER

During the decade of the 1980s, society in general became increasingly disenchanted with the results of private sector decisions and the institutions that serve the common good. Government at all levels came to be viewed primarily as an instrument of special interests. Major corporations were accused of making plant location, waste disposal, and product safety decisions with little regard for local communities, public safety,

and the welfare of long-time employees. Public universities were not immune from criticism, as rising tuition, a perceived preoccupation with research, and a lack of commitment to public service contributed to public disenchantment. The ivory towers of the land-grant universities, once viewed as beacons of hope by the middle class, came to be viewed more often as symbols of privilege and intellectual isolation.

Clearly, the public criticism and resulting disenchantment are not completely justified. Government at all levels has been forced to meet social needs with reduced revenue. Corporate America, facing an emerging global economy, was required to balance community and employee welfare with the reality of world markets. Universities did not abandon undergraduate education and public service to exclusively focus on research and consulting. However, as I travel the state of Pennsylvania meeting with citizen groups and government officials, I am asked about the apparent lack of a commitment of my university to seeking solutions to problems of health care, job creation, youth development, urban housing and the environment. My experience in this regard is not unique. Extension directors across the nation report similar concerns, and many university and industrial leaders have faced similar questions.

David Broder, in a recent column, argued that the decade of the 1990s will be extremely important for our nation's future as corporations restructure to prepare for the global competition of the 21st century, and President Clinton seeks to meet his goal of reinventing a government that will serve the needs of all people. In the same vein, the presence at this Forum of senior administrators and members of governing boards from more than 50 of the nation's land-grant universities indicates the strength of the emerging commitment of our public universities to reconnecting with the people they serve.

Creating "universities that matter" will require collaboration among public universities, government, industry and the nation's private foundations.

Creating "universities that matter" will require collaboration among public universities, government, industry and the nation's private foundations. Gathered at this Forum are the leaders of the majority of the nation's land-grant universities who will, in large part, be responsible for shaping the future of these universities at this critical time. Also in attendance are representatives of government, industry and the private foundations. These individuals can speak of the need for greater involvement of universities and can speak to the shape of current and perspective collaborations directed at major societal problems.

No single forum or conference can change the direction of the nation's public universities toward greater participation with society in solving common problems. The hope is, however, that this Forum can contribute significantly to the re-creation of universities that are connected to the public and that "matter" in the day-to-day lives of its citizens.

REMARKS BY

DAN MOORE

VICE PRESIDENT
PROGRAM DEVELOPMENT
W. K. KELLOGG FOUNDATION

I'd like to spend a few minutes reflecting with you on the issues of this conference—the balancing of social needs and the institutional roles that our respective institutions can play in building a linkage. And it seems to me that linkage is university outreach and the task is to think through how outreach can be conceptualized in the 21st century. No matter how we do that reconceptualization, it is clear that a whole lot of institutional innovation will be involved.

I'm drawn to a quote by Joseph Schumpeter, an Austrian born American political economist, who said that "successful innovation is a feat not only of intellect but also of will. It is a special case of the social phenomenon called leadership." And it was that combined force of will and intellect that led to the creation of the NELD program in the late 1980s.

Some of the early discussions that took place at the Foundation involved people in this room, Pat Borich from Minnesota and Pat Boyle from the University of Wisconsin-Extension, among others. It's gratifying to me, as I'm sure it is to those of you who were in those discussions, to have this meeting because I remember when it was just a germ of an idea.

My role tonight is two-fold. One is to talk about the various elements of NELD, very briefly. Two, to talk about why the Kellogg Foundation would fund such an activity.

The philosophy of NELD is based on several assumptions. The first is that there is going to be a great turnover of administrators in the Cooperative Extension System. The System is, and will be, having to search for well-trained leaders who are able to face a future that is going to be considerably different than the past.

A second assumption was that dramatic changes occurring around the world, influencing every person and every institution, will be impinging upon that new leadership. One writer referred to these changes as "discontinuous changes." Discontinuous because they're really not predictable. Who foresaw the disintegration of the Soviet Union or the fall of the Berlin Wall? You can name the news item today that was not predictable yesterday.

A third assumption that led to the NELD program was that, because of these changes, organizations, agencies and institutions will need to make dramatic adjustments just to survive in that new environment. I should point out that the beginning point for our discussions, and indeed the remaining focus of NELD, is on Extension, Cooperative Extension as a system. But it became clear early on in our discussions that even though that was the focus for this leadership program, we had to very quickly reconceptualize and think of the entire university, outreach in general, think beyond land-grant to public institutions of higher education. So, we will refer to Extension with a big "E" but I think more importantly, as providing the umbrella for our discussion, we're talking about outreach, or extension, with a little "e".

And the final assumption that was built into the development of the NELD program was that the type of leader that will be needed in these future changing environments will have a number of common characteristics. Jerry Apps and others refer to these leaders as "Next Age Leaders." They will be called upon to perform a variety of tasks and make decisions that no one has had to make before. They will be playing in games for which the

Over 50 land-grant universities were represented at the Forum

Next Age Leaders will be people of vision, people who can see the big picture, people who can deal with ambiguity, people who can face chaos.

rules haven't even been written. They will be skillful managers, yes, but more importantly they will be people of vision, people who can see the big picture, people who can deal with ambiguity, people who can face chaos. Very importantly, people who know who they are, know what they stand for personally, know what their organizations stand for and be able to deal with the flux in which they, and you, will find yourself.

The goals of the NELD program, then, were specifically the following:

- To enhance the current and future capabilities of Extension leaders at the local, state, and national levels.
- To provide Extension leaders/administrators at those three levels with the vision, courage, and tools to deal with this rapidly-changing environment.
- To help current and future leaders examine, or design, the organizational, disciplinary, and programming structures that are flexible enough to meet these new and emerging needs.
- And, finally, to inspire greater support, collaboration, and priority for the extension/outreach function among top administrators and leaders of our institutions.

Now that brings us to the three program elements. The first element of the NELD program is an internship program. This is an internship for individuals who have recently assumed administrative roles in Extension, or for people who show the potential for being Extension leaders and would become part of a national pool for leadership. One of the elements that was built in from the beginning is that these people should *not* all come from the existing Extension system. And, as you have a chance to meet the NELD interns that are here with us, you will see that many of them come from outside of what we would call Extension.

This Forum is related to a second component, a national conference for top administrators in the land-grant university system to discuss issues, functions, priorities and potential for university outreach.

Related to a third piece is a series of administrative workshops for current leaders at the national, state, and regional levels. There have been two of these administrative workshops. More than 50 people have attended, and I urge you to find out if somebody from your delegation has attended one of these.

This, of course, is the conference for top administrators. The planning group felt it was very important that a team of people come from each university. A team of people because you represent the kind of folks who need to talk among yourselves,

Dan Godfrey (left) and Norm Brown

create a critical mass, to create the new vision, or reinforce the vision for outreach on your campuses. I hope you will think of yourselves as a kind of focus group.

Let me talk just a minute about the NELD internship program. This internship program has a couple of components. The first is a series of seminars and workshops dealing with a variety of issues, including administrative leadership, understanding of the political environment in which leadership takes place, and understanding of the increasing diversity of our nation and the international connections that go along with that, and, finally, developing a personal and organizational philosophy for leadership in the next age.

The second component is an innovative demonstration project, a personal learning plan that involves doing something on that person's campus. The topics of those learning plans are fascinating. A number of these have to do with the internationalization of university outreach; relationships to Eastern Europe; evolving relationships with the former Soviet Union; the implications of NAFTA and particularly the relationship with Mexico; work-family dilemmas; the political process as it affects the university; working in an urban environment, etc. Those are the kind of topics that people are using to build projects at their home university.

Finally, there is the building of creative networks among the interns themselves, with their colleagues and peers at their home university and across state lines and across the country and the world. In fact, there are 70 NELD interns. More than 60 of them are here at this conference. They've been involved in planning this Forum and the other workshops and are being leaders in their own right already. These interns were selected for their demonstrated leadership and their leadership potential. I would bet that we're going to see them in key roles as time goes by.

Now, why would the Kellogg Foundation fund something like NELD? We fund something like this because we're committed to a set of principles. We're not committed to particular institutions or particular activities. And I would offer these few principles for your reflection.

Having worked as a research and extension specialist at a number of universities, and now having worked at the Kellogg Foundation, I think there's a lot of overlap regarding these principles. I personally think of the work of the Kellogg Foundation as an

NELD interns Sue Sadowske and Ralph Whitesides

enterprise of bridge building, of building bridges that connect on knowledge and the needs of people. Mr. Kellogg himself said that he wanted to create a foundation which "dealt with the application of knowledge to the needs of people." I think that the principles I'm going to describe and that drive our programming have to do with bridge building.

Rick Foster (left), Don Hanna, and Peter Magrath

The first principle is that any bridge worth its salt is a two-way bridge. It's not as simple as thinking of knowledge and need as a one-way bridge and that all we have to do is get the knowledge from this end of the bridge to the need at the other end of the bridge. It seems, perhaps, that there is knowledge of different sorts at both ends of the bridges. Certainly the people with the need have greater knowledge about their need. I believe that our research enterprise and the enterprise of scholarship should know about those needs. So, there are those kinds of needs and the whole business of moving back and forth is an attempt to connect the various needs and the various knowledges. Sometimes that bridge is thought of as one-way.

One manifestation is sometimes implied in the phrase "technology transfer." A number of years ago, I had an opportunity to be a part of a large research team funded by the U. S. Department of Agriculture to examine research extension linkages in agriculture. The project's formal title was "Technology Transfer in Agriculture." And I found that phrase to be misleading. A straightforward, but, in reality, a very naive view of a technology transfer suggests a simple linear model, one that has a scientist generating knowledge at one end, an extensionist delivering it in the middle, and a user who puts that knowledge to use in a production process at the other end. We found that it hasn't worked that way historically. The process is not linear. It has many feedback loops. And, in fact, knowledge flows both ways. So, the metaphor of a bridge that is a two-way bridge is, in fact, accurate.

As a part of that study, we conducted in-depth case studies of ten agricultural technologies. The driving question was "who was involved in the development and the application of this technology and what role did they play?" If there was a single lesson from the examination of these historical studies, it was that the key innovators, the originators of the ideas, and the people who played the major part in the dissemination of those ideas were the farmers

themselves and farmer organizations. We concluded that it is more accurate to think of the process as an interactive partnership rather than a linear process of technology transfer. It's a creative partnership among a variety of actors, in contrast to a one-way street that ends at the user who sometimes is assumed to be ignorant. In contrast, if anyone should be at the center of our deliberations, it is the people who ultimately use and benefit from the technology.

If we're building a two-way bridge, we can develop a good deal of mutual understanding; if we're generating this creative partnership, there has to be a commitment to both ends of the bridge. The W.K. Kellogg Foundation thinks about making grants all along that bridge. Sometimes you'll hear us talking about community-based programming. Other times you'll hear us talking about institutional strengthening. But it's all about linking one end of the bridge to the other and making sure that the bridge is a two-way bridge.

The second thing we talk about is supporting the building of the bridge, not research on bridge design. This leads us to say in our brochures and publications that we don't do research. Well, in fact, we're continually rethinking that statement. We're wondering if research and extension, or research and transfer, isn't for us a false dichotomy. Because, certainly, in the process of doing our projects we learn a lot. Is that applied research? Well, yes. And in the process of doing our projects, we learn a lot and our grantees learn a lot, so we think we should be in the teaching business. And all of a sudden you're talking about teaching, research, and outreach.

Leon Chavous (left) and Stephon Edwards

I want to draw from an article by Jim Votruba, Vice Provost for University Outreach at Michigan State University. In his piece, Jim says: *"We must begin by reconceptualizing the core academic mission. Most universities describe their mission as involving teaching, research, extension, with each of these mission components being treated as separate and conceptually distinct forms of professional activity."* I will add that we tend to vulcanize them in organizations, we tend to vulcanize them the way we tend to do business. Jim then goes on to cite Ernest Boyer and his recent book, *Scholarship Reconsidered*. Boyer writes, *"Surely scholarship means engaging in original research, but the work of the scholar also means stepping back from one's investiga-tion, looking at the connections, building bridges. Building bridges between theory and practice and communicating one's knowledge effectively to students."*

Boyer says we have to rethink that tripartite, we have to rethink what may be a series of false dichotomies, and that what's gone under the rubric of Extension needs to be rethought. We should think of scholarship, then, as a kind of integrated web of discovery, integration, application, and teaching.

This has some serious implications. Should everybody be involved in outreach? Maybe not, the way it's been thought of before, but maybe so, with a reconceptualization. So we're talking about a bridge that is DOING. We're talking about a bridge that is two-way.

And, thirdly, we're talking about a bridge that is connected to real need. To me, need is where it hurts. Need is where there are people who are in

Surely scholarship means engaging in original research, but the work of the scholar also means stepping back from one's investigation, looking at the connections, building bridges.

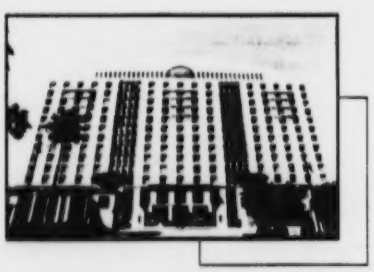
trouble and need the application of the knowledge we know about. That is the touchstone for our programming. In fact, when the Foundation was started, it was called the Child Welfare Fund. It was called that because as kids get better, the rest of society gets better.

Sometimes we have to build networks of bridges. We have to build bridges between universities to community colleges to service providers to kids. Rethinking the way we build that network of bridges is at the heart of rethinking university outreach. And it has implications for what we mean by access. If you go back to the beginning, access was access for poor kids, farm kids, kids of the laboring class who didn't have access.

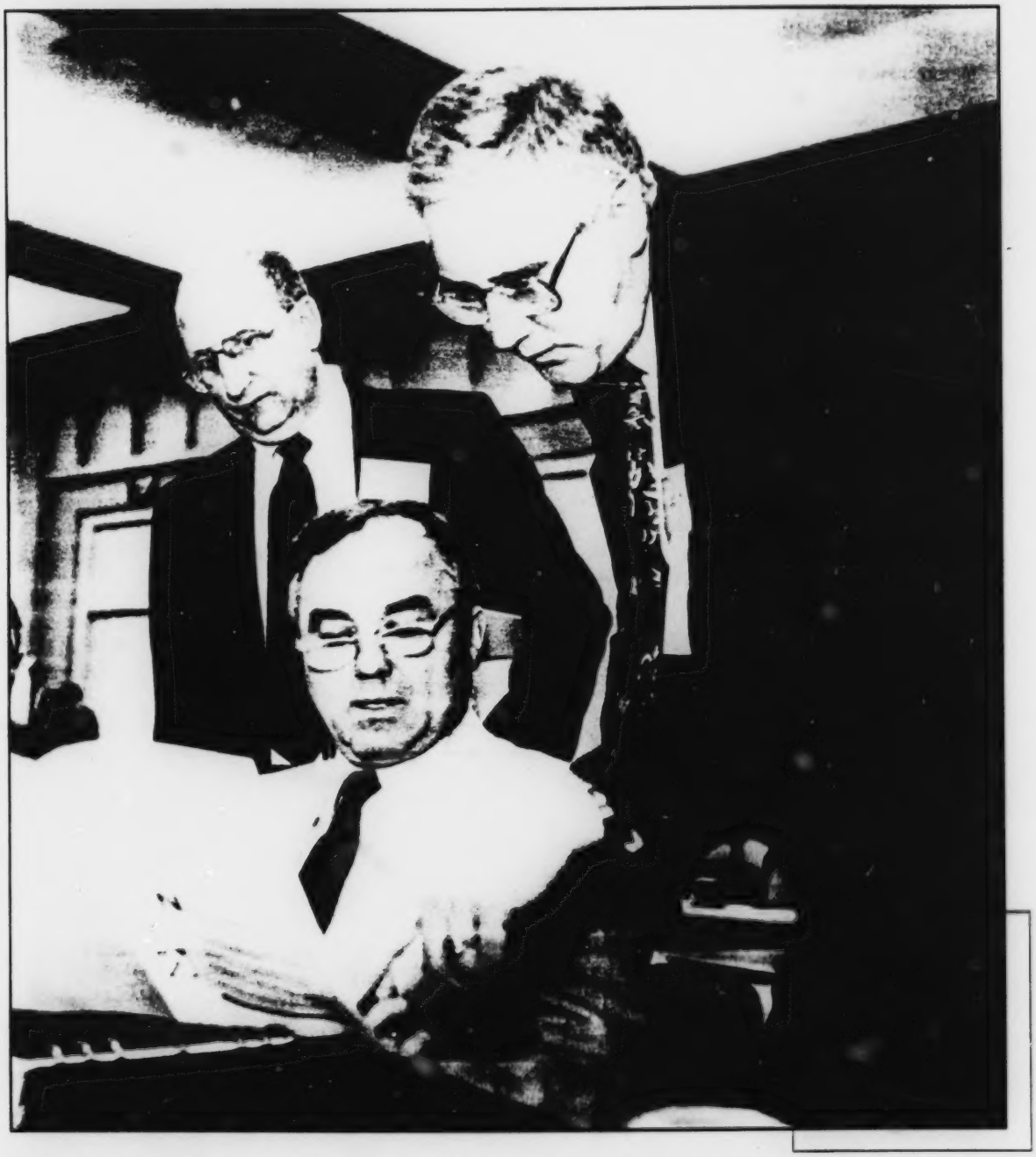
I refer to Jim Votruba's article again where he says that *"In the kind of new society where people have three to five to six different careers, it's not just access at the undergraduate level, it's access at those transition points."* At that point, the relationship between teaching and outreach gets blurred. At that point we have to think about who's paying for what. We have to think about whether our university continuing professional education programs only apply to those who pay. Does it only apply to lawyers and doctors and businessmen who can afford to pay or should it apply to teachers, social workers, nurses and others? It seems to me we have to rethink that notion of access in the next century. If you think about doctors, lawyers, businessmen, and nurses, social workers, and teachers, there's also a gender bias built in there. We ought to think about that too.

The fourth principle we talk about is investing in grant making that has the potential for sustainability. Will it be a project that transforms the relationships within the institution, or is it just another grant? In fact, some authors have pointed out that we have a project mentality—i.e., when this one is over, we've got to get another one. Frankly, we try to look for projects, whether they're in the North Avenue Women's Center, or on a Detroit street corner in an organization called Joy for Jesus, or whether it's in a land-grant university, that are transforming. Will the relationships be different? And, in fact, one of the appealing things about the NELD project was that the proposers made a very convincing case that there was potential for sustainability of this effort, that it would be built into the kind of institutions they came from. I was delighted to learn that the Extension Committee on Policy has made a commitment to continue the internship part of this program after Kellogg funding ceases within the next year and has also made a commitment to continue the senior administrator workshops.

Finally, the principle that we work on is that we prefer to invest in the bridge builders rather than the concrete. We don't build buildings, we don't build institutions, we invest in the bridge builders. Mr. Kellogg said, "I'll invest my money in people." And I know of no place where



this has been more true than in this project where it has been invested in the 70 NELD interns. It has been invested in the leadership of university outreach. It seems to me it's this kind of human capacity building



Utah State University colleages Phil Rasmussen (left), Rex Tueller, and Byron Burnham (pointing) review the Forum Agenda

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Mary Kaye Merwin (left) greets Hoover Carden

that was at the heart of Mr. Kellogg's statement that education offers the greatest opportunity of really improving one generation over another. We're talking about educating and educating bridge builders. We're in that business. And I think you are too.

This brings me back to the central mission of your institutions and the deliberations of this conference and it brings me back to the Schumpeter quote regarding leaders being the combination of will and intellect. Leadership is making it happen.

There's a great scene in the movie "The Empire Strikes Back," where Yoda is trying to teach Luke Skywalker to extract the spaceship from the swamp. Yoda says, you have to use your will to extract that spaceship. And Luke says "I'll try, I'll try." And Yoda says, "There's no try, there's only do." We're talking about the needs of people, and for us, there's only do. And in doing we must rethink the rules. In doing we must rethink the laws of our institutions. We must disenthrall ourselves.

This brings me back to a quote from Abraham Lincoln's address when he signed the Morrill Act in 1862. Lincoln said, *"The dogmas of the quiet past are inadequate for the stormy present. The occasion is piled high with difficulty and we must rise to the occasion. As our case is new we must think anew. We must disenthrall ourselves."* To me that means we must put away, for at least the purposes of this conference, our assumptions about the way the world has to work and be like Luke Skywalker and think about how we extract that spaceship from the swamp.

I have found that the NELD interns are doers. I hope that you provide them space within your institutions. To try out. To be leaders.

My hat is off to Jerry Apps and his NELD colleagues, to the advisory committee, and to the interns. I sense a new excitement among you and a confidence that the current leaders of the Extension System are going to be doing and rethinking and reconceptualizing.

Finally, the principle that we work on is that we prefer to invest in the bridge builders rather than the concrete. We don't build buildings, we don't build institutions, we invest in the bridge builders.

REMARKS BY

JERRY APPS

NELD NATIONAL COORDINATOR
UNIVERSITY OF
WISCONSIN-EXTENSION

You will be pleased to know that 50 or 51 institutions are represented here from across the country, with teams representing nearly every one of them. We number close to 300. We are extremely pleased to see the amount of interest in this kind of conference.

Now to some of the principles we've seen emerge as we put this conference together. We have seen the NELD program develop over the last two to three years.

I want to share that development in five words. And let me start with the first one. The first word that I would use is **Reinvention.** I'm borrowing from David Osborne in his best selling book *Reinventing Government.* Institutions, public and private, across this country are reinventing themselves just now. Look at what's happening to IBM, to General Motors, to General Dynamics. They are reinventing themselves, albeit a difficult task for them.

And we are seeing new organizations emerge from this reinvention. We are seeing some that are starting afresh. I think of organizations like Ben and Jerry's Ice Cream Company in Vermont. A fascinating little company that's no longer a little company. And they have a very different philosophy of organization. They start with the principle that nobody in the organization can earn more than seven times what the lowest paid person can earn. And they have similar kinds of principles in their organization.

Another organization that I'm familiar with and that makes this point is the Oshkosh B'Gosh company from Wisconsin. Back in the middle 1800s, Oshkosh B'Gosh began making overalls for farmers and overalls for railroad engineers and those nifty striped caps that farmers wore and that railroad engineers wore. And Oshkosh became very successful. Their clothing was known across the country for its quality and for its appropriateness (I'm not so sure about its styling). Farmers everywhere wore Oshkosh B'Gosh bib overalls. It was a sign of position. Railroad engineers wore them as well.

And then the farms began disappearing across this land and the railroads began closing down.

"New organizations emerge from this reinvention"

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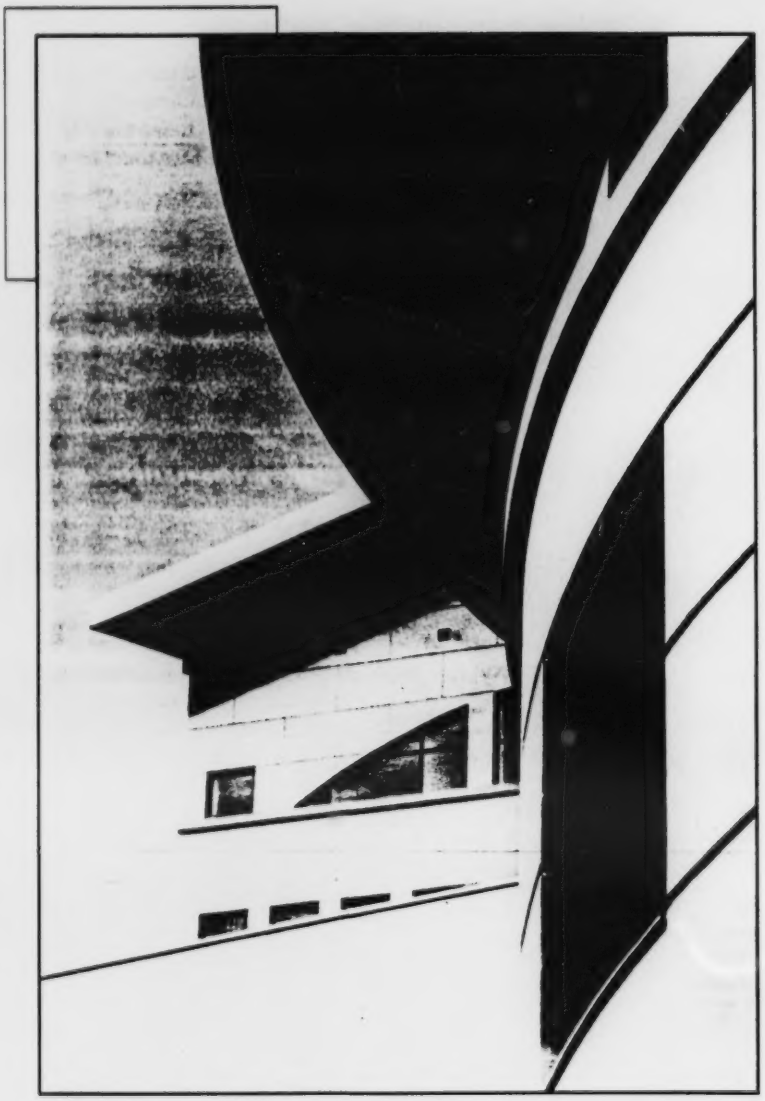


And by 1950 Oshkosh B'Gosh was about to close its doors. And as the story goes, one day, a grandfatherly type person came into the offices at Oskosh B'Gosh at Oshkosh and said, "You know, I have this little grandson and he's about three years old just now. I was born and raised on a farm and I spent 50 years on the land. And I'd really like to have some overalls for my little grandson and I'm wondering if you'd be willing to make up a pair for him." And the comment back was "Well, geez, we make overalls for adult farmers and for railroad engineers and we're not into making overalls for kids." And the farmer prevailed. And they made some overalls for this young lad. And the neighbor kids, as the story goes, and the mothers and fathers in the community saw these overalls and you know the rest of the story. Oshkosh B'Gosh today is a multi-million dollar manufacturer of children's clothing. And there's a message there. They were reinvented. And I'm not so sure it was their idea. That's another part of the whole concept of reinvention.

There have been few times in the history of this land where reinvention was more appropriate than at other times. And if we look at the history of higher education there were a number of those times. In the middle 1800s, when the Land Grant Act was passed, when the Morrill Act was passed, was one of those times. And when the community colleges began to form, that was one of those times. And I think we're at one of those times right now. The time is right for reinvention. Our national governmental leaders are talking about fundamental change. Restructuring. Changing the public schools, changing the way health service is offered. This is a time of great change. It's a time when reinvention is a real possibility. We are at a time where we are moving from what we commonly refer to as the Industrial Age to something different. We have gone from the Agrarian Age to the Industrial Age and now we are going to something different. And we don't really have a label for it yet. Some people call it the Post Industrial

Era. Some people call it the Information Era. Some people call it the Global Era. Some people refer to it as Post Modernism. I simply call it the Next Age.

We are moving to another time. And that time will have a whole new set of assumptions. It will require us to think very differently and act very differently than we have in the past. Reinvention means looking at who we are and where we are and where we ought to be and what it takes to get there. Reinvention means deciding what of the old we want to bring along with us and what of the old we need to leave behind. Reinvention means looking at ourselves from a new perspective and not allowing our histories and our cultures and our rules to paralyze us.

Reinvention means looking at ourselves from a new perspective and not allowing our histories and our rules to paralyze us.

The second word that this conference is about and that the NELD program is about is **Relationship.** We are talking about relationships to the private sector. We are talking about colleges and universities relating better to one another, establishing coalitions, establishing cooperative endeavors. We are talking about relationship to government. We are talking about relationship to communities. We are talking about a new relationship of research to teaching to outreach. And Dan touched on that a moment ago. We are on the threshold of a whole new set of relationships as we think about research and teaching and outreach and we may very well fold those in as we reinvent the academy and begin talking about university's contributions and not be so concerned as to whether or not it's research, outreach or teaching.

The third word I want to talk about is **Commitment.** Commitment to access. Access for those who can afford our education opportunities and access for those who cannot. Access for those whom we ordinarily reach and access for those whom we have a dickens of a time reaching. Access to communities that we may not have included, and their problems that we have not included in our agenda as much in the past as we might in the future. Commitment also means commitment to a society and its future. It means a commitment to educational technology and how it can help us at the most fundamental level redefine what teaching means and what learning means. Part of the next age

Bernie Jones (left) and Ted Alter

will require us to redefine what the elements of education are about. It's going to be that fundamental in my judgment. We are going to reinvent not only

Jim Christenson (left), Jerry Apps and Don Trotter

the structure, but the fundamentals of what education is about.

And the fourth term is **Learning Organization.** I am borrowing from Peter Senge, and his book, *The Fifth Discipline,* where he talks about the learning organization. We are all aware of how each of us must become a lifelong learner. To the interns in the NELD program I have often said that within three years, half of what you know will not be appropriate. It will not fit. It will be new. We will not know what it is, even. We cannot prepare you for that. We cannot teach you the skills to do that because we do not know what those skills are. And that's true as we work with people. And so rather than talk about skills, I talk about capacity building. I talk about individuals developing the capacity to deal with rapid change, the capacity to become lifelong learners. But we often overlook that, at the same time that individuals become lifelong learners, so must institutions. And that's a new idea to some people. Every organization must become a learning organization that's constantly looking at itself, reflecting on itself, and reinventing itself. Just as each individual will constantly be looking at himself or herself and reinventing beliefs, directions and all of the rest.

The fifth word is **Paradox.** And that does not mean two Ph.D.s in the same family. We are talking about outreach and new approaches for doing it. But while we are here talking about outreach and new approaches to outreach, we see across this land an "academic cleansing," an academic purification, moving back to doing what we have done in the past rather than considering moving forward. So we have a paradox. We have a paradox of moving forward and remaining at the same place. We have a paradox of being progressive and being conservative. What's most interesting about that paradox is that we are not choosing up sides. In paradox we look at BOTH/AND rather than EITHER/OR. And that to me is a characteristic of the next age.

Howard Martin

For many of us this is a time of great despair with budget cuts and all that goes with it. And yet, I think, it's a time for elation because everyone is awake, everyone is alert to change. It's a time when many things can happen. It's a time when we must get past saying basic or applied, liberal or conservative, agriculture or social issues, research or teaching. These are paradoxes at this time, and if we can begin thinking about BOTH/AND, rather than EITHER/OR, I think we can move beyond that.

I was remembering the quotation from Charles Dickens in A Tale of Two Cities. *"It was the best of times, it was the worst of times. It was the age of wisdom, it was the age of foolishness. It was the epoch of belief, it was the epoch of incredulity. It was the season of light, it was the season of darkness. It was the spring of hope, it was the winter of despair. We had everything before us, we had nothing before us."* Dickens wrote that in 1859. And it is so true today in what we're facing.

These are the five concepts that have come out of our NELD planning and that I believe are themes that can work their way through this conference—**Reinvention, Relationship, Commitment, Learning Organization, Paradox.**

REMARKS BY

WILLIAM SCHREYER

CHAIRMAN OF THE BOARD
MERRILL LYNCH & CO., INC.

It's truly a pleasure to be here today for three reasons. First, because I always welcome an opportunity to improve myself through the company I keep. Second, this is my first outside function since becoming the Chairman of the Board of Penn State's Board of Trustees. I'm therefore glad that its focus is on a function that is so central to Penn State's role. And third, as I look ahead to the twenty-first century, I

The day has passed when someone starting out in life could reasonably expect to do what I have done: stay with the same company, the same firm, for a working lifetime.

am more persuaded than ever that colleges and universities must expand their outreach programs if America is to maintain its economic leadership in the world.

The Morrill Act of 1862 that established the Land Grant College Program was one of the great milestones in America's emergence as a modern industrial giant. It was also a milestone in America's development as a beacon of democratic achievement that would light the way for the world, to set the nation on its way toward the goal of making higher education available to everyone who wants and can use it. That's accepted wisdom today, and it was a radical idea back then.

From the start, outreach programs have been part of the Land Grant Colleges Charter. The Morrill Act singled out for special attention as you all know, the teaching of agriculture and engineering. Looking ahead to the next century, I see an increasing need to teach workplace skills of all kinds together with a greater need than ever for continuing education and the many other ways colleges can serve the larger community. I say this as an employer. And specifically one whose business in a very real way is other people's business. At Merrill Lynch we finance corporations of nearly every category. Therefore, we're exposed to the wide variety of workplace needs that American businesses have as well as the changing nature of those needs.

The day has passed when someone starting out in life could reasonably expect to do what I have done: stay with the same company, the same firm, for a working lifetime. Or even stay in the same business. A young person finishing high school or college today can expect to change jobs, five, six, or more times during his or her lifetime. For many this will mean a complete change of careers. For most people confronted with such a change, it's simply not

Bernie Jones and Ayse Somerson

Forum participants exchange ideas

feasible to go back to college, simply not feasible to go back to the college campus. Most will need outreach programs. More and more the college and the community will have to serve one another. In the age we're entering, no one can learn enough during his college days to last a lifetime. The world is changing too fast. The universe of human knowledge is expanding too rapidly. It's been estimated that the half-life of knowledge for engineers is now three to five years; for accountants, three to five years; and for computer scientists only one to two years.

When I was at Penn State, television was still a novelty. We still hadn't entered the computer age, the space age, or the information age. We used adding machines and manual typewriters. I have been lucky. My own work has been a process of continuing education. But most people are not so lucky. To keep up with the changing times, they'll need access to the kinds of resources a university has in such abundance and to the quality of teaching a university provides. And they have got to integrate this into their regular working lives and family lives.

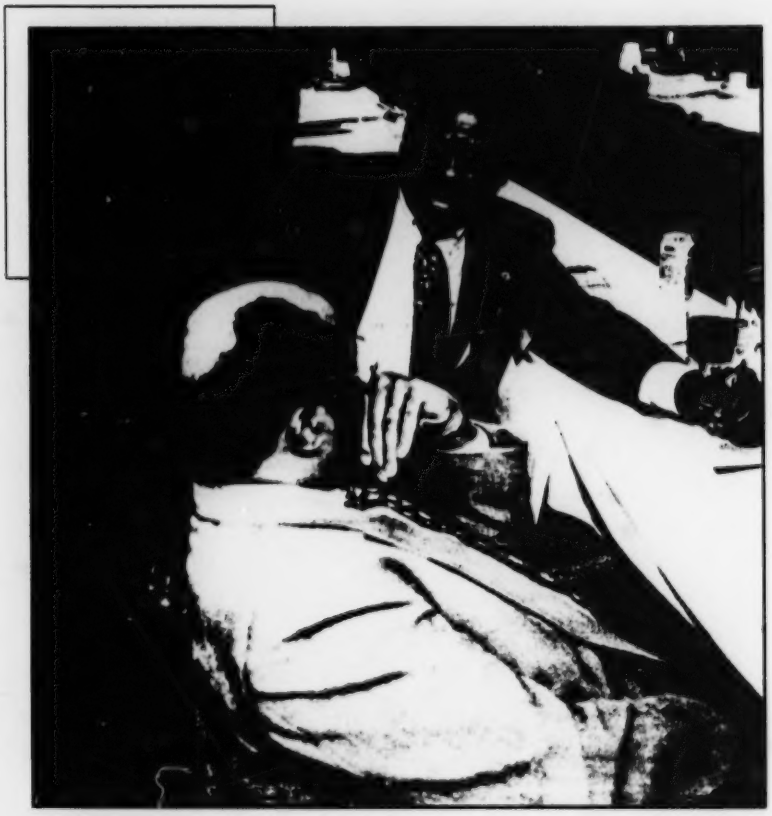
Preparing as I am right now to retire in a few months, I can appreciate the frustration of those who lose their jobs in their 50s or early 60s. They face not only financial strains, but what's often more serious, a greater emptiness which their work lives used to fill. Again, I'm lucky. I know I can look forward to an active retirement. But for many whose work has been at the center of their lives, having no work to go to is almost like having no home to go to. Again, there is a growing challenge here for outreach programs of all kinds, not only to teach them new skills, but to remind them that it's never too late to learn. It's still very hard for these new unemployed to adjust. They often feel they must have failed or more commonly worry that their friends and family will think they have failed. But it's not necessarily so. Maybe their companies have failed. Or maybe their companies have simply changed. Companies do that. They adapt. Adapting means changing. Changing often means a need for different people with different skills. Not necessarily better, but different. It's then that outreach programs are needed to help the displaced begin anew.

Particular skills may not be transferable, but the capacity to learn new skills increases with each new skill learned. Nobody likes to think about having to learn new skills or start a new career late in life. But doing so can be liberating and rejuvenating. So it's not necessarily a bad thing that the next generation can expect to have several jobs, even several careers instead of just

one. I guess maybe it's like having several lives instead of just one life. You know, there's a lot of truth in the observation that when we stop learning new things we start growing old. And I for one am going to keep that in mind. Therefore, I think that we in the land-grant colleges should set out consciously and deliberately to show the way for the nation. Not just to serve our communities but to discover and demonstrate the best and most varied ways of meeting the new needs of new generations in a new age.

My eye was caught last week by the cover of *Fortune Magazine* that showed five well-dressed, middle-aged professionals. The cover line pointed out that the new unemployed are older and better educated than before and stand to be on the street a long, long time. The story inside cited a survey of unemployed executives by a New York outplacement firm in which 90% felt they needed to upgrade their skills before hitting the interview circuit. They also found a lot seeking new skills—bankers who wanted to become teachers, accountants looking at the health care field. And that of course, reflects one of the conspicuous differences about the recession we're now coming out of. In the 1982 recession, just over 22% of those who lost their jobs were professionals and managers and administrators. In 1991, more than 40% were—double the 1982 figure.

So, the fact that a lot of the new unemployed are well-educated doesn't mean that education is unneeded. Quite the



opposite. It means we need it more than ever. We have a growing population of people who don't need basic education but do need continuing education, who need to learn new skills, catch up on new developments, broaden their horizons or deepen their understanding in order to keep up with the changing world. Business looks to the colleges and universities to provide a work force with the training and education to equip its members for the modern workplace. But we also need more. We need a citizenry that understands what it takes to make a modern economy grow and prosper. This means technological literacy. It also means economic literacy.

In the next century it won't be enough for workers to be able to use new technologies. Important public policy issues already often turn on technology assessments. This will be increasingly true in the future. If the broad voting public isn't technologically literate, it won't be capable of informed choices. By the same token, the nation's prosperity depends on a voting public that's literate in the elements of what makes a modern, free economy grow. The woods will be full of demigods peddling the delusion of something for nothing. And people will have to be able to sort out truth from fiction in what they hear.

Beyond this, an educated public today has to be educated about the world. There was a time when the next town could be considered a foreign country. Now countries half a world away, are, in effect, the next town.

My 45 years at Merrill Lynch have taught me that in today's world we have to start by doing three things. First, we have to see the world whole. Second, we have to take the long view. And, third, we have to look with a clear eye at what works and what doesn't. All this points to a need for continued accessibility, a broad-based integrated education in the whole field of the arts and sciences, including, but not limited to, the changing needs of the workplace itself.

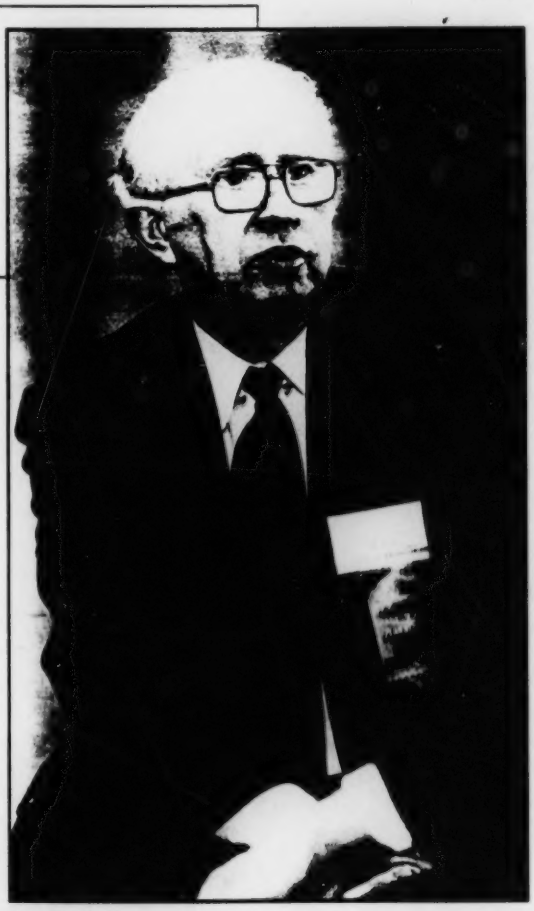
We live in a knowledge age in which the success or failure of nations will depend on how they marshall and use knowledge and how they extend it and expand access to it. In this, the university is absolutely central. One of its roles is to extend the frontiers of knowledge, and that's research. The other is to expand access to knowledge, that's teaching. And outreach—bringing knowledge to the broader community and bringing the members of that community to the founts of knowledge—is likewise crucial. The residential university will continue to be key in passing knowledge on from one generation to the next. But increasingly, we're also going to need the kind of continuing education that outreach programs represent.

Looking to the future, I'd like to see a lot more interaction between the university and the business community. It's healthy

when people active in the business field, whether engineers or executives or accountants or technicians, are exposed to the academic life. And it's healthy when those charged with preparing the next generation for life are exposed to the world of business. It's important that the university community bear in mind how much its own members can gain from the outreach function. And I'm not talking now about funding, though that of course is important. I'm talking about practical, hands-on exposure to the real worlds of manufacturing and commerce and the services they depend on. The flow of information and understanding to the university can in the long run be almost as important as the flow from it.

If we're to play the outreach role that we must, there are several things that I believe we must do. First, one of the most crucial is to change the reward structures within the university. In most colleges today, a faculty member's performance in outreach programming gets short shrift in the promotion and tenure process except to the extent that it brings in extra funds. Outreach will never achieve its full potential unless it's recognized as the essential function it is, and unless that recognition is reflected in promotion and tenure policies.

Second, it's essential that the top officials of the university—beginning with the President—lead actively and aggressively in promoting outreach as an essential component of the university's mission as, I am happy to say, President Thomas is doing at Penn State.



Pat Boyle

The third need which has to be addressed both by university and by business is a show of greater sensitivity on each side to the timing constraints of the other. When a company tries to tap into the faculty resources of a university, typically the company executives want action now. Universities have their own timetables, and faculty members often have heavy teaching responsibilities. In these situations, we need a lot more attention to ways in which we can mesh the respective timing needs to the mutual benefit of both.

Fourth, the advances in communications technology have opened a world of new opportunities to put the information resources of the university to constructive use in the broader community, even as we conserve our faculty resources. At Penn State, for example, a lot of corporations have direct electronic access to our library and other informational resources without intervention by a single person. Today's information technology makes remote places accessible. Electronic links can replace physical links. We can take the classroom into the home, or the workplace; we can import the workplace into the classroom. All without the faculty members having to travel.

In all that we do to expand our outreach programs, I would stress one thing: we've got to strive for a constructive balance. Teaching, research, service, including outreach, are all essential functions and all are interrelated. Success at each enriches the others. If we let any

one be eclipsed, we diminish all.

I wouldn't presume to tell educators how best to use the new technologies, but I'm certain that they represent the wave of the future in business-university collaborations. I'm also certain that this collaboration expressed with the outreach programs pioneered and developed by our land-grant colleges will be central to America's continued success and prosperity in the twenty-first century.

REMARKS BY

THOMAS PAYZANT

SUPERINTENDENT
SAN DIEGO UNIFIED
SCHOOL DISTRICT

My task is to talk about public outreach with respect to public education. I want to begin by saying a few things about context. I think it's very important to understand my perspective about context in order to understand the comments I'm going to make about university-public school cooperation and partnership.

I think we could all agree that traditionally the purpose of elementary and secondary education has been primarily

an academic one. But there have been, traditionally at least, three other purposes as well. First, to prepare an enlightened citizenry so we could have a vibrant democracy. Second, to prepare young people to be productive in the world of work. We're hearing a lot about that now in terms of world class standards and global competition. And third, education has something to do with developing personal fulfillment in individuals so that they can contribute, not only to their own, but to the community's quality of life.

If you look at the history of American education, there have been some interesting tensions along the way with respect to which of those purposes receive the greatest attention. And while now we seem to be focusing very much on education for the world of work and global competition, there are those who get a little bit nervous and say "Let's not forget about keeping the democracy vibrant and let's not forget about quality of life issues as well."

Context. Role of the school.

I've been a superintendent for 24 years in four different districts in four different states and the role today of the school is quite different from what it was 25 years ago. Certainly we still have an academic orientation, but it is increasingly difficult to focus just on that as we're asked to do many other things. We're involved in integrating the society. We're dealing with racism. We're dealing with violence and safety issues that result from what spills over into the schools from the broader community. We're putting major resources into meeting the health needs of young people—60% of elementary school children in San Diego city schools qualify for free- or reduced-price lunch. And if you take K-12, it's one out of two young people. In San Diego, California, over $80 million of my $550 million operating budget goes to programs to support disabled or handicapped children.

Dorothy Shields, Jim Christenson, and Manuel Pacheco (right)

We are parenting. Talk to teachers today and they say, "Gee, when I signed on for this, I thought I was going to be a teacher of the child, not the parent of the child, the social worker for the child and a number of other roles as well." So roles are changing for teachers, for principals, and for superintendents. And fit in driver education, sex education, drug education, violence education, human relations education, environmental education, parenting education. What happened to the academics? Wasn't that the major mission of the school?

Just a word or two about demographics in terms of context. San Diego is now America's sixth largest city, as of the 1990 census, the eighth largest urban school district in the nation with 125,000 growing by 1,500 to 2,000 students a year. We're now 30% Hispanic; 19% Asian, with large Indochinese and Filipino populations; 17% African-American; 33% Anglo; and 1% other. In San Diego city schools, there are over 60 different first languages spoken. Over 31,000 of my students have other than English as a first language and are not yet proficient in English. Of those 125,000 students, 13,000 get special education services and 14,000 are enrolled in gifted and talented education programs.

Context. Organizational change.

While the role of the school has changed a lot, the structure and the organization of the

school really hasn't. And if you were to visit any one of the 155 San Diego schools today, you would see many similarities with respect to the organization and structure of the school that you remember from your own school days, whether it was in rural, suburban, or urban America. The only thing that might surprise you is that we have the highest class sizes in the nation in California, with elementary class sizes running 30 - 31 and secondary classrooms in the high 30s. But you would still see people doing what I'm doing: standing at the front of the room, talking at a group of students. In other words, the organization and structure of schools haven't changed that much.

What about learning and teaching? Most of us came through a system where there was a curriculum. It had its scope and a sequence. It was taught in a linear way. It was based on the assumption that you had to learn basic skills which were the prerequisite to enable you to deal with higher order skills. There was a lot of rote learning that went on. The role of the teacher was to impart information and the student would demonstrate proficiency by giving back to the teacher the information that he or she had presented to the student. We know from cognitive science today that it's a lot different now. We know a lot more about learning, and learning isn't always sequential. But you can get all children to deal with the higher order, the more advanced kinds of things before they have all of the prerequisites. Not everybody learns in the same kind of way. These findings have profound implications for the curriculum and how you teach.

Participants probe Forum presenter

Doesn't it seem odd that when you get into the world of work, one of the fundamental things that you have to do is to learn how to work in a team? To be part of a team, to work with other people, to come up with a joint project? What happens in a school? If you work in a team you're called a cheater. You don't share information. Everybody does their own little thing. The young students whom I work with today are the young people who will be in your institutions tomorrow. And they come with different experiences, both in terms of their own background and their new experiences in school with respect to teaching and learning. If the university is going to be ready for them—and outreach to them—you've got to examine your assumptions about teaching and learning and how it occurs in basic university programs and continuing education and outreach programs as well.

Change is needed because societal expectations have changed. Demographics have changed. The needs of the

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Norm Brown

economy have changed. Complexity is the norm. And fragmentation and little programs and projects won't cut it anymore. We've got to figure out the connections and the big picture so that we really do, in our educational institutions, help young people understand that there is that whole which is indeed greater than the sum of the parts. And in the schools I work with, we don't do a very good job of that. Very often, undergraduate institutions and sometimes professional schools and graduate programs don't either. Young people find themselves going through courses, and they don't make the connections and they don't see the connections within a particular discipline, between the concepts and the theory they learned, and how you apply them in terms of doing real things in the real world. This has to change because there are threats to our quality of life, to the vitality of our democracy. And because we have allowed special interests within our respective institutions—in elementary and secondary education, within universities, within the larger community, within state and national government—to control and support thinking that is more myopic than broad and encompassing, collaboration is necessary.

Let me give you some positive examples of some small beginnings in San Diego. One is a program called Pipeline 616. It's a collaborative effort with San Diego city schools, San Diego State University, San Diego Community College and the Private Industry Council. It is based on the fact that we're taking kids after 6th grade, through the 16th year, or the end of a baccalaureate degree, hopefully. And the idea is to provide the kind of support and encouragement through all those years. Not just in their educational experience during the academic year, but in their intersession if they're in a year-end school. Or in their summer program in terms of job and personal development as well. And to have those four agencies work together to that end.

We're also working with seven institutions in the community around an effort called New Beginnings. The city of San Diego, the county of San Diego, the city schools, the community college, University of California, San Diego Medical School, Children's Hospital, and the housing commission. We're taking a look at all of the services that each of those institutions provide for children, youth and families. We've got a demonstration center at one of our toughest inner city elementary schools—1,300 kids. About 18 different languages spoken. High mobility rate. We're trying to figure out how we can bring the services that we provide for children, youth and families together to work in a more efficient way through the collaboration. There are a couple of community-based

Charles McDowell (left) listens to his audience

groups that are doing parent education. One is called the Parent Institute. It's run by a very challenging leader, committed to parent involvement, particularly in the Hispanic community. And he does programs with the schools where he comes in and does a six-week seminar with parents. And then, Tom Day, who is the president of San Diego State University, and I try to go to every graduation. Tom Day's statement to those parents of elementary kids is, "If you support your kids, if you work with them and support them in school, see that they don't drop out, and they get a decent grade point average, I'll guarantee that there will be spot for them at San Diego State University when they graduate from high school."

You want to talk about outreach while you're here, talk to Mary Walshok at the University of California, San Diego. She's the best at it. She's got so much outreach going on in this community you can't believe it. Wonderful models. The danger is that there are too many bits and pieces. The university has been the catalyst for the San Diego dialogue. It has brought together business and community leaders to look at the big picture with respect to some key issues facing San Diego.

There are all kinds of examples in terms of what's happening with high tech industries. And particularly UCSD, but not exclusively that. The biomedical research and what you can get from a community when you've got wonderful institutions like Scripps and the Salk.

Partnerships. In San Diego city schools, 155 schools, we've got about 373 partnerships. Some with departments within colleges and universities who are working specifically with individual schools in a variety of ways. Working with individual students. Getting students from

We are often pitted against each other when we should be aligned in terms of working to provide the continuation of educational opportunities and access for our young people.

junior high and middle level schools onto college and university campuses to see what it's like. Summer outreach programs, a variety of things. We're doing the obvious things in terms of teacher training, but they tend to be a little bit more traditional and we haven't broken out of the old molds yet.

Let me finish by making half a dozen points or so about what are some of the barriers to overcome and why we've got to really work very hard to get the collaboration going. And I'll give you the California perspective.

We live in a political world and as public universities and public elementary and secondary schools we compete for public resources. And in California, now going into its third year of fiscal crisis, we are often pitted against each other when we should be aligned in terms of working to provide the continuation of educational opportunities and access for our young people. So we've got to find ways within the political realities of our various states to not be pitted one against the other at the very time that we need to make the connection so that there can be a good transition from school to college. And I'm not going to just point fingers at you, I'll point back at me and say we have got to do something with the reward and incentive system in elementary and secondary schools as well. But until outreach—community service work in real schools for people who are training teachers for example—until that is part of the reward and incentive system, in addition to publishing, then it isn't going to cut it. And as you get kids who have learned in different kinds of schools with different kinds of teachers, university professors are going to be less able to do what I'm doing right now and hold the attention of young people for an hour lecture. And they're not going to accept that as learning. They're going to come in with lots of experiences in group learning; they're going to be more sophisticated than you perhaps know in terms of technology. And they're going to expect a lot more discussion and interaction if I do my job well, and I know that I've got to do it a lot better.

It seems to me that there is a lot of tension on university campuses between the professional schools, the arts and sciences or whatever the equivalents may be at your school and the outreach/ extension/continuing education services. You've got good people in all of those areas, and it would really be helpful to us, as we try to collaborate, if we saw some evidence

Mary Pankowski

within your own institutions of people from the professional schools, arts and sciences, outreach/extension service working together so we're not dealing with these different pieces at the university.

My final point is in terms of accountability. Let me make a prediction, and you're going to hope that I'm wrong. There's been a lot of focus on accountability in the public schools the last few years and I think rightly so. We are under great pressure to move from a system of accountability that is based on compliance which is measured by how well you meet rules and regulations, to a system of accountability that is based on outcomes in terms of how well you perform. And that means we've got to do a better job with assessment that is performance-based, in terms of individual performance for students and assessment of the quality of the institutions.

Thus, you should be asking yourselves "What is the academic educational outcome of four years or six years or seven years at a college or university?" You'd better be prepared to cover this. I don't have all the answers, but I can tell you we're working very hard on it, and I think you're going to have to work on it next.

Linzie Muldow (left) greets Larry Hudson

Final point. If we continue to be forced into a situation where we are working against each other rather than together, we're going to get picked off. We're going to have to find a way to identify our common interest—which is young people in education—and our respective roles going back to those purposes I started with—academic purposes, dealing with the vitality of our democracy, preparing young people for the world of work, and dealing with community, personal fulfillment, and quality of life issues and carving out our respective roles. We can't afford any duplication of effort, any overlap. Resources are shrinking. So we've got to come up with the political strategies together to make the case for the big picture where the whole indeed will be greater than the sum of the parts.

REMARKS BY

HOWARD LAVINE

MAYORAL COMMUNICATIONS ASSISTANT
CITY OF BALTIMORE

On behalf of Mayor Schmoke I want to thank the National Extension Leadership Development Program for inviting the Mayor to this Forum.

Mayor Schmoke is mayor of the twelfth largest city in the country with a population of 740,000. He is also a trustee of Yale University. In one role, his obligation is to a city that faces all the challenges of any large urban area—crime, underfunded schools, illiteracy, a tax base that is not expanding fast enough to keep up to the growing demand

for services, a shortage of affordable housing for lower and moderate income families, AIDS, substance abuse, and much more.

In his role as a Yale trustee, Mayor Schmoke frequently has to weigh the same kinds of requests for help from New Haven that he, while wearing his mayor's hat, makes to the University of Maryland, the University of Baltimore, Johns Hopkins University and Baltimore's other institutions of higher learning. So, he knows from where you speak and he has faced the same kinds of decisions you face—how to maintain a university's primary mission of education and research while also serving the interests of the community.

Both roles create difficult challenges. However, being both a university trustee and a mayor, Mr. Schmoke understands the needs of an urban community and the priorities of a large university. Those needs and priorities are not identical but neither are they in conflict.

There is much a university can do to integrate itself into a community, to come off the sidelines without sacrificing its core obligations of education, discovery, financial viability. This is especially important for land-grant universities which have a long tradition of service. The challenge now is to apply that tradition to contemporary urban problems.

On the other side, there is much local government can do to make a university part of its economic and human development strategy. To do otherwise is not just a missed opportunity, it's a prescription for failure. Colleges and land-grant universities are certainly no exception. Universities and businesses and community organizations and local government must work together.

This has been very much the story of government/university relations in Baltimore. The mayor has invited Baltimore core schools of higher education to join him in carrying out his agenda for physical and human development. And Baltimore's

Bill Moore (standing) and Paul Gutierrez (foreground)

Part of the university outreach challenge must be to bring the ideals of university life—the higher principles of enlightenment, discovery and moral inspiration—to urban communities. This has nothing to do with lowering standards. It has to do with uplifting minds on an equal opportunity basis.

universities have responded. This partnership can be seen in the work of the Cooperative Extension Service of the University of Maryland. But it can also be seen in the mayor's overall economic development strategy, which includes fostering the growth of higher education, and in numerous health, education, and family service programs that involve a combination of city and university resources.

The best example of a city fostering the growth of higher education is the mayor's two-year strategy for downtown development. Baltimore's inner harbor is a landmark in urban design, much copied and visited by millions of tourists every year. But the mayor is committed to expanding the redevelopment of downtown to cover a much larger area than the inner harbor. To do that, he broke downtown into six distinct districts; one of which is called the University district, home to the University of Maryland Medical Center, the University of Maryland at Baltimore and a new VA hospital. The mission of this district is to facilitate the expansion of the university and the medical system and to foster its physical and intellectual connection to the business center district, the inner harbor, and adjoining neighborhoods.

Where does that connection lead? One place is the Christopher Columbus Center for Marine Research and Exploration (COMB). It will be the new home for the University of Maryland's center for marine biotechnology. The mayor is a strong supporter of COMB and has donated the city's last large tract of land at the inner harbor in order to make sure that the Center is built. But he also understood that the University of Maryland, through the Christopher Columbus Center, was making an invaluable contribution to Baltimore's economy and the education of its young people. The mayor envisions the Columbus Center as an open classroom that will inform the public about marine life and inspire a whole generation to enter the sciences. He also sees it as a source of new international markets and a symbol of Baltimore's transition to an economy based on brain power.

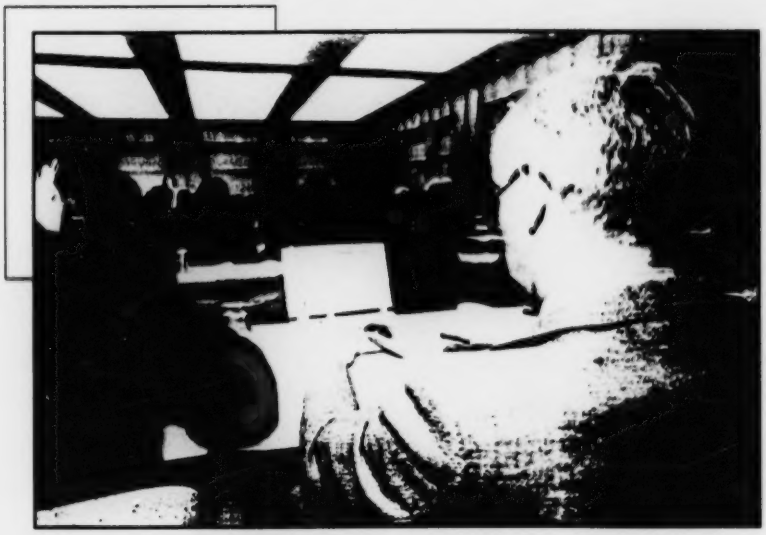
I intentionally started with the Christopher Columbus Center to make the point that university outreach can be far larger and its purpose far more eloquent than specific programs targeted to specific populations. Part of the university outreach challenge must be to bring the ideals of university life—the higher principles of enlightenment, discovery and moral inspiration—to urban communities. This has nothing to do with lowering standards. It has to do with uplifting minds on an equal opportunity basis.

Jim Christenson

I know that one of the questions this Forum is intended to help answer is the role of

extension services in urban communities. Land grant colleges traditionally try to bring their newest discoveries to rural communities. But we are a different country than we were when Congress first provided for land-grant colleges. We're more urban, transportation is high speed and communication is instantaneous. There are fewer small family farms. Rural poverty is still a problem, but it is at least matched, and perhaps surpassed, by urban poverty. All of these factors have led public universities to consider their obligation to urban communities and the proper role of extension services in cities. University of Maryland has a very successful Cooperative Extension Service (CES). I'd like to give you a few examples of the kinds of work that the Cooperative Extension is doing in our community.

CES focuses on four areas: improving diet, nutrition and health; helping people learn and become productive citizens; increasing family economic stability; and residential horticulture and pest management. These four goals have translated into numerous programs that include financial counseling; job readiness training; nutrition education classes; introducing hundreds of young people to science through a series of USDA youth-at-risk grants; training human service coordinators for the housing authority of Baltimore; training recycling block captains; and much more. Most of these programs are provided in partnership with city agencies, schools or community organizations.



Byron Burnham captures a presentation

Dan Moore

Morgan State University and Coppen State College, both historically black colleges, provide 75 volunteer scientists for the Extension Service's residential science camp. The Department of Recreation and Parks donated compost to help start 26 new community gardens. And the city's office of recycling helped train the recycling block captains. The mayor is proud of the work of University of Maryland Cooperative Extension and believes strongly that CES, backed by the resources of the University of Maryland, should be deeply involved in improving the quality of life for the people of Baltimore.

The University of Maryland also submitted a grant proposal to the U.S. Department of Education that would have linked the city's universities and colleges in an effort to help community organizations deliver services to families, children, and youth. Mayor Schmoke wrote a letter of support for this proposal and, although it was not funded, it is an excellent example of how a public university can provide technical support and management services to neighborhood organizations. It is also consistent with the mayor's strongly

held view that urban regeneration must be from the bottom up. Communities must be the guiding force in their own rebuilding.

The best example of this is the Sandtown-Winchester project in west Baltimore. Sandtown-Winchester is one of the poorest neighborhoods in Baltimore. The core of the Sandtown-Winchester program is 300 new homes for low and moderate income families funded in part by a federal grant and built by the Enterprises Foundation. The mayor has rallied the people of Sandtown and encouraged them to evaluate their health education and family service needs and to actively participate in the design and implementation of services that will meet those needs. The mayor sees Sandtown as a long term investment in human capital in which government, universities, and business provide communities with skills, financial support and management expertise. He wants those who know to help those who don't. He wants to build communities that will be safe and self-sustaining long after government and private enterprise build the homes and repair the streets. He wants poor communities to plan change, make mistakes, learn the lessons and find the self confidence to control their own lives. He wants to teach people to do for themselves.

This is the basic premise of the land-grant college: to make service a vital part of their mission. Several universities are already involved in Sandtown-Winchester. Johns Hopkins University, in conjunction with the city health department, is doing prenatal screening and followup and the Hopkins Institute for Public Policy Studies is working with the Robert Wood Johnson Foundation on drafting a proposal for health care delivery in Sandtown. Morgan State University is involved in landscaping and the design of open spaces. Morgan State also wrote the needs assessment survey for Sandtown and analyzed the data that was collected. The president of Coppen State University is on an interim advisory board made up of residents, city agencies, and service providers, and Coppen is working on developing festivals and public art. Finally, students from Loyola College are working with Habitat for Humanity in Sandtown to rehabilitate vacant houses. Sandtown is a major success story and illustrates well how universities can become involved in the development of urban communities.

There's a great deal of university participation in other areas of Baltimore. Yale University has its Urban Resources Institute which, in partnership with the city and the U.S. Forest Service, is teaching young people about urban parks and land management. There will also be community forestry projects in ten neighborhoods.

Another example of university outreach is the health science curriculum Johns Hopkins is offering to Dunbar High School. Johns Hopkins is also involved with several other programs in east Baltimore. They're funding a local clergy organization that operates a citizens patrol. They are also fingerprinting children. The university has helped fund a major cleanup of this community and has agreed to integrate their own master plan with the community planning process that is going on in east Baltimore.

Greg Yarrow

Baltimore has one of the most

successful school/business partnership programs in the country. We now have over 200 school partners and among them are every university and college in and around Baltimore. Each partner adopts one or more schools and provides a wide array of help. University of Maryland has adopted at least ten schools. It is one of the most important contributions any school of higher education can make.

How much community outreach is enough? If there is an upper limit, we have not reached it. Mayor Schmoke would obviously like as much participation as possible from local colleges and universities as he works to fulfill his human services agenda. I'll mention some of the principle areas of that agenda, areas where land-grant universities could usefully provide assistance to local government and the residents of urban communities.

Obviously one area is education. We have an underfunded school system that spends $60,000 less per classroom per year than Maryland's wealthiest jurisdiction. We need smaller classrooms, more computers, art and music, and help preparing young people in math and science. The mayor is supporting a new life sciences high school; the president of the University of Maryland at Baltimore County is on the advisory board of that project. The city also has a high dropout rate, driven in part by a high adolescent pregnancy rate. We need outreach to these people to get them back into school and to provide them with job training. The city's office of employment development is already working on dropout prevention, job placement, and other youth services, but this remains a high priority for the mayor.

Edward Fort and Carol Cartwright

Cities are the cultural, economic, and intellectual centers of our nation. They are the repositories of our past, and they are the cradle of our future, which makes them places that all universities should comfortably call home.

In 1987 the Mayor declared that Baltimore would be the city that reads, so he has continued to emphasize literacy and basic skills training for adults. He also helped create the Baltimore Commonwealth and College Bound which is a partnership that includes the University of Maryland. Commonwealth and College Bound also offered job placement or money for college to students with high grades and good attendance. University of Maryland received the mayor's

business recognition award for its support of Commonwealth. The mayor's agenda also includes family services—early childcare, prenatal screening and follow-up, drug treatment, environmental cleanup, lead paint abatement, affordable housing for low and moderate income families, minority and women business development, race relations, and public safety.

On the subject of drug treatment and public safety, the mayor has long advocated that we recognize the connection between a national drug policy and both crime and AIDS. He has called for making the war on drugs a public health war in which the bulk of our resources would go into treatment, not law enforcement. One public health strategy that he strongly supports is needle exchange. The city's health department in partnership with the Johns Hopkins School of Public Health is already beginning a model needle exchange program. If the city is exempted from certain state drug paraphernalia laws (there's a bill in the Maryland Legislature right now that may allow us to do that) the Mayor would certainly encourage public universities to get more deeply involved in the issue of drug policy reform. And that would include research and policy analysis and suggestions for new forms of treatment.

These are just some of the areas where Baltimore either is, or would like to, work in partnership with its friends in higher education. As Mayor Schmoke said in a recent speech to business leaders, "We are one community with one shared destiny. We must commit ourselves to working together."

Cities are the cultural, economic and intellectual centers of our nation. They are the repositories of our past, and they are the cradle of our future, which make them places that all universities should comfortably call home.

REMARKS BY

WILLIAM KOLBERG

PRESIDENT & CEO
NATIONAL ALLIANCE OF BUSINESS

Today I ask you to ponder the fact that your institutions of higher education, the finest in the world, operate in a society which has allowed its non-college trained work force to become seriously short of world class competitive levels. It is that problem which greatly concerns us in business, and I hope greatly concerns you in higher education. Let me begin by summarizing the problem with four points.

First, we are in the middle of the third industrial revolution, the innovation revolution which

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started twenty or so years ago. Rapid technological change has fueled the integration of the world into a single global economy. Advances in transportation have accelerated the movement of people and products. New telecommunications and computer technology have exponentially boosted the ability of workers to obtain, to manipulate, and to transmit information. Most significantly, new developments in manufacturing technology and process controls have transformed the way that we make products in the United States. Both the rate and the depth of technological change has revolutionized the world of work. Its effect on jobs has been profound. It has made many jobs obsolete. It has made many more jobs more complicated and more technical and, thus, has raised the skills necessary to perform many of the jobs we now see.

Second, at the same time that this revolution was going on, our public schools have been stalled for at least the last 25 years. The dropout rate is the same as it was in 1970. Millions of our young people who get diplomas are still functionally illiterate. Consequently, we in business believe that there are somewhere between 30 and 40 million front line workers who are functionally illiterate—they can't read beyond the 7th grade or compute beyond the 5th grade. And these millions of workers must be upgraded and retrained if their companies are to reach world class levels.

Number three. As you all know, public education is still stalled. Our kids place last or near last in international exams in science or math. We in business share the belief that we must radically reform the K-12 public education system in this country.

Fourth. We must realize that everyone in this country now needs a first class education. As you well know, we've done a great job with the 25% of us who have been lucky enough and smart enough to get a four-year college education in this country. We now must realize that the middle third of the labor force now needs a world-class education.

Allyn Smith

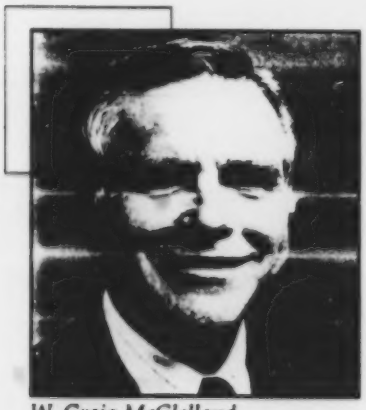
Let me summarize the beginning by two truisms. The first is you must be as well educated today to go to work as to go to college. And the second truism: we must become the best educated nation in the world if we expect to continue to have the highest standard of living in the world. That's my message in a nutshell.

Let me talk a little about productivity. We do have a productivity problem in the United States. U.S. productivity has grown more slowly than any other industrialized nation for the past decade, which explains why, after inflation, average weekly wage rates in the United States have declined by 12% since 1973. I hasten to tell you that we still lead the world in productivity. But other countries are closing the gap. Production workers in Germany and Switzerland make more money than production workers in this country, and the reason why is because they're more productive. They're worth it. Consider the

You must be as well educated today to go to work as to go to college. . . . We must become the best educated nation in the world if we expect to continue to have the highest standard of living in the world.

German worker today. The German worker in manufacturing today makes on average $24.36 an hour plus benefits. The German worker gets 42 days paid vacation by national law, works 38 hours a week and will soon work 35 hours. Compare that with the average U.S. worker. The average U.S. worker makes $15.39 an hour, gets about 23 days off instead of 43, and still works a tough 40-hour week with a lot of overtime, German companies continue to prosper—companies like BMW are moving some of their production to a low-wage nation. Guess where? South Carolina.

We can't be sure how much of our lost productivity is due to our under-educated and our under-trained work force. One can't quantify that. But there seems to be universal agreement, certainly in the business community, that an important component of that is our badly-trained, badly-educated front line work force.



W. Craig McClelland

You're all familiar with Adam Smith's paradigm that talked about the comparative advantage of nations. And when he put that together he talked about the comparative advantage being the simple things.

We in the United States for the last 100 years have had a lot of that—the great natural resources base that we have built on, a large labor force of immigrants who came to this country. Wealth in this country has been with us for as very long time. As a matter of fact, the definition of national productivity that we use today was first articulated by Adam Smith. Early in this century, this country became richer and richer because we had an abundance of those things that fed into our comparative advantage. The business model that we established in the United States during the last century became the model for all commerce.

Judith Bailey

We even invented the interface between work and workers, the assembly line thanks to Frederick Taylor. We matched the skills of workers with production needs and we segmented work so that those with a fourth grade education could earn very high incomes compared to the rest of the world. And we made it possible because we had a hierarchy of front line supervisors and foremen and engineers and managers in order to make all the decisions and all the front line worker had to do was the simple task.

The Adam Smith paradigm, my friends, is pretty much gone. And something else is happening. You look at our foreign competitors in Germany, Japan, Sweden, Singapore, Taiwan. Work is different in those countries. Workers are educated and trained and given more responsibility. And this allows management to thin out layers of supervisors. It leads to better quality, faster cycle time, and lower costs.

What has allowed management in other countries to radically change work organizations is a new ingredient to this comparative advantage paradigm—individual education and training. Our industrialized competitors have developed national policies which link their economies to the quality of their work forces. It is national policy throughout Europe to train youth for work. Business and government have joined to help people get trained and earn good wages.

Let me use Germany again as an example. Many companies in Germany spend $18,000 a year for three to four years on each apprentice. On average, the million and a half apprentices now being trained in Germany are costing their companies $10,500 a year, over a two-to-three-to-four-year period.

In Japan they have a unique cultural consensus system that drives their children to excel in high school as a way to be hired by the top corporations as front line workers and then receive the kind of skill training that they need.

These nations are catching up. They are not there yet, but they are catching up with us in productivity, and we in this country have not made those changes nearly as broadly as we need to. Increasingly, unfortunately, we have a high wage, low skill, front line work force. We no longer have the monopoly on technology, and it's shocking to realize that it's not really very important where things are invented any longer. What is really important and what our competitors do better than we do is to take the technology and commercialize it.

Commercialization of invention is the key to competitiveness. And the key to commercialization is the front line work force that is so skilled and so flexible and operates on its own, that it can take the best technology from wherever it is in the world and apply it and turn out the high quality, low cost products.

Dolores Spikes

Let me give you a few examples. The Japanese manufacture nearly all the video cameras, video recorders and fax machines sold in the United States. That technology was all invented here. They dominate the world market in those three areas and increasingly in other areas. Why? Because they figured out something we have not—how to commercialize the best technology into making products of high quality and low cost that they are able to export around the world. It isn't only in manufacturing where work force quality and cost count. Essentially in manufacturing and increasingly in services, our labor force is competing with the labor forces around the world and, unfortunately, it is too often losing.

The economic utility of this nation will increasingly turn on the skills, the integity, the flexibility, and the performance of our non-college trained work force.

Let me talk about automobile manufacturing. Foreign competitors in the automobile business still continue to grab market share. Why? Consider the comparison between Japanese and American automobile manufacturing processes. In Japan, it takes 17 man hours to build a car. At Japanese factories in the United States, it takes 21 man hours. At the typical U.S. car manufacturing plant in this country it takes 25 man hours. The difference: training of the front line workers—worker empowerment and new work organizations. In Japan new auto workers receive 380 hours of training on top of a very high quality high school education. In the United States these same workers at our plants receive 48 hours of training and probably have a very mediocre high school education.

The economic vitality of this nation will increasingly turn on the skills, the ingenuity, the flexibility and the performance of our non-college trained work force. Policies to encourage investment are, of course, important, but they must be coupled with the skilled flexible work force to promote market share, productivity, and wage gains. The world's most competitive enterprises, those with peerless productivity and quality, have discovered that technology alone no longer insures competitiveness. Technology must be utilized by a work force that gives "wisdom to the machine," workers who have the kinds of skills that will allow powerful new technologies to be fully and effectively employed.

Moreover, a world class work force must operate in an environment that encourages continual improvement and advancement. What pulls technologies and workers together into robust collaborations in American industry is the organization of the enterprise itself, the content of the job, the design of the production process, and the relationship between people within the firm. They are highly interactive and interdependent.

Zerle Carpenter and Judy Bailey

Firms cannot design high performance work systems without the people that must run these systems. And technology must also be there. New skills and cutting edge technology will offer little advantage if they are not brought together in a pattern which maximizes the synergy between them.

I want to suggest three sets of actions that we in business and you in higher education must take to rebuild our front line work force. First, we must move rapidly to install high performance work organizations in millions of small- and medium-size businesses in this country and we must spend much more on building the skills of our non-college trained work force. We have a good start in this huge quality effort in the United States with the 15 Baldridge Award winners and you know their names. They are household names—companies like Federal Express, Motorola, Xerox, AT&T and many more. Over 500,000 applications have been distributed over the last five years on the Baldridge Award process and tens of thousands of companies have become involved in the TQM process leading toward a possible Baldridge Award. However, my friends, it hasn't gotten very far. Our best guess is that no more than 10% of American enterprises have a Total Quality Management program that will stand any kind of inspection at all. So out of six to eight million businesses in this country, there are literally millions of small- and medium-sized businesses that we must help and reach in some way to

Pat Borich

motivate them toward the kinds of things I'm talking about.

Let me talk a moment about training costs, not just management, front line workers. On average, American companies spend 1.4% of their payroll on training and a significant percentage of that cost is for upper management training and not front line workers. Compare that with our competitors overseas. It is not at all uncommon in many other countries to find companies spending three to six percent of payroll on training the front line worker. Constant training. Lifelong learning.

The challenge before us in business is to understand the challenge we have, business by business, and then move to spend a whole lot more on the kind of front line worker training that will lead to the high performance work organizations that we must have.

I think higher education has an important role in this effort. Our challenge here is not different in concept from the challenge you met in helping to move this country over the past 100 years to the forefront of agricultural productivity. I remind you that as recently as in the 1920s 40% of our work force was engaged in farming. It is now down to 2.7% and that 2.7% produces mountains of foodstuffs that we have trouble selling even overseas. The combination of basic research, technological development, and application of best practices by millions of small entrepreneurs characterized the astounding success we have had in this country in building agriculture into the world class of doing business in that industry.

Our challenge here is not different in concept from the challenge you met in helping to move this country over the past 100 years to the forefront of agricultural productivity.

We've got to do that now in manufacturing and services. And the characteristics and the concepts are very little different.

Just this past week President Clinton announced his intention to spend $17 billion over the next few years to build up the basic research, technological development, and outreach activities of the federal government in the manufacturing and high technology areas. I call your attention specifically to the additional funds and responsibilities of the National Institute of Standards and Technology which runs five Manufacturing Technology Outreach Centers and will have dozens, if not hundreds, over the next few years. These centers are set up specifically to transfer knowledge. Not just technology, but knowledge on work organizations, knowledge on training, and to do the training itself in small companies. Forty-four of the states now have small but growing activities which provide assistance to small- and medium-sized businesses of a variety of kinds. So far, most of these 44 states and their activities are carried out by civil servants. But there is no reason that that needs to continue that way.

Another activity that I would point to is the National Coalition of Advanced Technological Centers which is a consortium of 60 community and junior colleges drawn from the 30 states now operating in this area. Many of you have been involved to some degree in these scattered efforts. And I call them scattered because we still do not have anything like a coherent strategy in this country made up of federal, state, and local education business efforts to transform our firms to the high performance work organizations that we demand. We are in the very early stages.

Thomas Bartlett

The second set of actions that are necessary to build a world class work force are in the area of reforming K-12 education. We need to *radically* reform K-12 education. We must redouble our efforts to meet the six national education goals that our governors and the President have agreed upon. We in business believe strongly that we must move quickly to set national education content standards, build a national assessment system covering the content standards, and move to change the curriculum frameworks so in fact we do teach these things effectively. These three elements that we're going to build nationally, of course, are voluntary for the states. But we must move immediately to begin to build the kind of standards so everyone in this huge $250 billion, K-12 industry and the 43 million students, their parents and teachers, all understand what world class standards are and where we are in meeting those standards. We're the last ones in the industrialized world to pretend that in today's world we can continue on the pattern that has every school, every school district, pretty much going it alone. We are challenged nationally, and we need national standards.

I would like to take one area that is uniquely your responsibility. Teachers are the front line work force of education. And if we are to have the best educational system in the world, we

Your institutions have the central role in preparing tomorrow's teachers and equipping them with the skills to transform our nation's public schools. I find the voice of higher education strangely muted in this intense national debate on education reform.

must have the best teaching force in the world. Today we do not. Teachers in Europe and Asia are highly respected. The pay is high. It is a very sought-after career in our competitor nations. Compare that to the United States, where teaching is relatively low status. The pay is average or low. We only ask our teachers to work three-quarters of the time. And in this country, I believe it is fair to say that instead of drawing our teachers from the top 25% of college the way we see in foreign countries, our teachers come from the bottom 25% in terms of academic rankings. This situation demands a cultural shift that will take us a long time to accomplish. Then we'll begin to turn it around. You've heard this old axiom: in a perfectly rational society, the best of us would teach and the rest of us would do something else. I believe that passionately and I think you do too.

Your institutions have the central role in preparing tomorrow's teachers and equipping them with the skills to transform our nation's public schools. I find the voice of higher education strangely muted in this intense national debate on education reform. I sense that your schools of education are too often in the backwater of your institution both in resources and in prestige and certainly in importance. All the training and retraining that we in business can do will go for naught and will be second rate unless the people who emerge from our public schools are trained to world class standards. Unless our work force is better trained and better skilled than the work force in Japan or South Korea or Taiwan or Germany, we can't continue to compete successfully.

We in business and you in education must help build a skill training system for our non-college bound front line workers that begins early in their school years and ends with the acquisition of high skills which are certificated. Viewed from the perspective of the work place and its demands, our public education system has a fatal flaw. It is almost wholly oriented to the needs of students who will go on to four-year colleges. School guidance counselors focus almost solely on the college bound. Students not bound for college are relegated to the general curriculum. If there ever was a throw away curriculum in most high schools, that is it. And those students have a very difficult time making their way in the economic world and it will get tougher as time goes on. Transition from high school to two-year technical schools and community colleges is also usually a long and a rocky transition. Seldom do high

Charles McDowell

school general education or vocational education graduates go directly into a post-secondary institution. In high school there is little incentive for students to

stick with a specific vocational program. They see no clear occupational advantage in doing that. Today most of these non-college bound young people drift for years after leaving high school and apparently decide to continue schooling only upon forming a family or finally choosing an occupation that requires more training.

We in business and you in higher education must work together to build a new school-to-work training system. Such a system must be employer driven, because only employers can keep up with the rapid advances in technology. But there is a very large classroom component to such a system which should be supplied by post secondary institutions. We need a new American youth apprenticeship system which trains all of our non-college bound youth in a system of classroom and on-the-job training. The building of such a system is a very high priority for the Clinton administration.

The role of your institutions in building this system is clear and very important, particularly, if you have multiple campuses that serve specific communities. Your institutions should be curriculum builders with employers and should be the site for classroom components of the youth apprenticeship system.

We all know that knowledge now doubles every ten years, that the life cycle of our most endemic new tool, the PC, is about 18 months, and the decay rate for knowledge and skills is rapidly accelerating. Each of us will go through many generations of changes in our skills and our jobs in the course of a lifetime. To stay relevant and productive will demand lifelong learning. This concept of lifelong learning for everyone, not just for the educated elite, is still little more than a cliche. How do we transform all of our institutions, public and private, into elements of a system which enables each individual to be a lifelong learner? I think the answer to this question will radically alter the very concept of your institutions and mine.

The great public universities of this country have led the way in building the finest system of higher education in the world. You are now challenged to reach beyond your historic role and to become also a leading force in bringing excellence to a lifelong learning system which serves all Americans.

REMARKS BY

DOROTHY SHIELDS

DIRECTOR OF EDUCATION
AFL-CIO

I really want to thank the National Presidents' Invitational Forum on Outreach for inviting labor to this discussion. While we feel the mechanics got the short end of the Morrill Act, we have long been partners with the land-grant universities which host our labor studies centers. And indeed many of you here represent those very institutions. I would say my perspective is a dual one, of provider and consumer. And, therefore, I am cognizant of many of the problems that your universities have suffered.

Labor and higher education have a common agenda. We certainly have at the top of our legislative priority list NAFTA, work and family, urban problems, so we have a very shared common agenda. We may not always be on the same side of the issue, but we certainly are working together to enlighten on those issues.

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If a highly skilled workforce is to be effective in changing our economy, we need just as much emphasis on teaching and motivating industry how to restructure the work place to provide a more challenging environment for workers.

During the last dozen years our labor studies centers at your universities have suffered staff reductions, trimmed programs, and budgets cut to the bone as public funds for education have been reduced. We were prepared to endure our fair share of the burden and shall certainly continue to do so. However, we also were called upon at times to disproportionately suffer in some cases, when the budget crunch was used as an excuse to divert funds from programs for workers. And to be perfectly honest, particularly for unionized workers.

It is most encouraging therefore, to look at working through these difficult times still ahead with an administration in Washington that believes in putting people first again. It is equally gratifying to once again work with a Labor Secretary who acknowledges that unions give real voice to workers. Thus, we're eager to work with the Clinton Administration as they seek to develop a high skill, high wage economy and to work with higher education in interactive partnerships to make that goal a reality.

William Schreyer (left) and Thomas Payzant

I would likewise urge you to join with our industry partners represented here to assist in changing the work places of America, as Bill Kolberg talked about, because only a very small percentage of today's work places are learning places. If a highly skilled work force is to be effective in changing our economy, we need just as much emphasis on teaching and motivating industry how to restructure the work place to provide a more challenging environment for workers.

Preparation for employment is one issue, but all too often we've had the very real experience that the training was not lost, but the jobs were lost—they were changed, retooled and deskilled, or sent off shore. Even as we engage in this dialogue today about training and education, we should note that we currently have in Boston, and certainly here in California, a highly skilled, *unemployed* work force. Job creation, good job creation, not the low wage service jobs that we've seen so much of, remains a challenge to all of us.

Organized labor does not come to the table on training and education issues without a long history of practical experience. We in the labor movement believe that collective bargaining provides the best framework for workers to receive universal access to education and training opportunities. One needs only to look at the skilled work force that has been traditionally provided through negotiated programs. For example, apprenticeship programs in the building trades, some over a hundred years old, are jointly bargained and administered, as are programs in metal trades and printing. Equally comprehensive have been the joint programs in the maritime industry which cover everything from basic skills, career ladders, upgrading through college degrees, and post graduate technical training.

Rick Foster

The labor movement feels pride of ownership in the public education system, for the earliest unionists fought for the establishment of the public school system and advocated for equal access and advanced schooling for all who wished to enroll. And that was not to be determined either by status or by ability to pay. That remains the labor movement's goal today.

We have always called for the broadest possible curriculum, encompassing liberal arts, the sciences and occupational studies. We are committed to a quality education system because we know it is important for a vital democracy, for a vigorous economy, for family well-being and for personal growth. As an organization we offered literacy and language classes to our early immigrant workers just as we do to our current immigrant populations. Our new programs are born of our traditional philosophy but respond to the present need and future expectations of our members—job security, job advancement, and an improved relationship between management and employees that recognizes the talents workers bring to the job.

We in labor are the original "put people first" in training. We believe worker-centered programs should be the norm, and we advocate that workers should always be a part of the design and delivery of training programs. We even advocate that formula for non-union workers—let them elect (through secret ballot) their representatives on training committees so they have an independent voice in determining their needs and developing a training program to address those needs.

Several examples illustrate what we believe. AFSCME (American Federation of State, County, and Municipal Employees) District Council 37 in New York has a basic skills program which is administered from funds from the collective bargaining agreement. District Council 37's approach reverses the standard design practice that usually starts with the evaluation of the work place from a top-down management outlook. Instead, the union has developed programs designed not only to meet the needs of the work environment, but that are structured around the experience, skills, and abilities of the current work force. The central premise of

their programs are built on the skills workers have, not on the ones they lack. This program also encompasses higher education opportunities and reimbursed tuition fees.

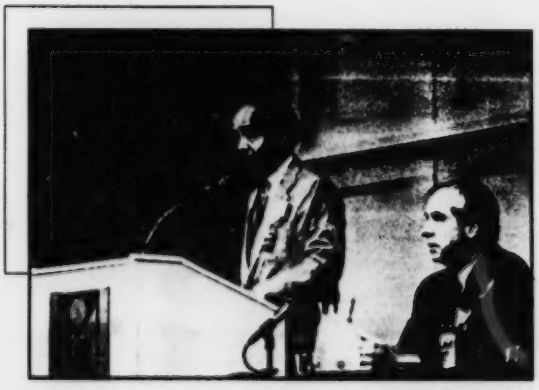
The United Steel Workers in their national agreement with Bethlehem Steel and other major steel companies echoed a similar philosophy when they jointly established a Career Development Institute. Their authorizing resolution specifically stated: *"Because personal growth and enrichment flourish in an atmosphere of voluntary participation, the Career Development Institute will allow our members to play a significant role in the design and development of their jobs, their training, and their education about their work environment. The Institute rejects the erroneous and discredited premise that workers have much to learn and nothing to teach. The success of the Institute will show that our members have much more to offer than the strength of their bodies; when given the opportunity, they can, and do, contribute in countless ways to the success and security of the working relationship."*

The Career Development Institute rejects the erroneous and discredited premise that workers have much to learn and nothing to teach.

The United Automobile Workers and the Big 3 auto makers negotiated training and education programs based on the jointness principle again achieved through collective bargaining. All have created company-funded national resource centers to hold classes and develop materials. They also serve as information centers for local areas and help coordinate federal and state training funds.

Two unique UAW programs are the Paid Educational Leave (PEL) and the Tuition Assistance Program (TAP). The PEL program offers union leaders and rank and file members an extended education in the economic, political, business, and technological factors affecting the auto industry. It is fully-paid time, stretches out over several weeks, and includes meetings with industry and government officials in Washington, classes at MIT, Harvard, Boston University, and seminars at union and corporate headquarters. Educators from several universities and colleges assisted PEL administrators on program development and curriculum. The TAP program enables workers to study for a college degree without any direct relevance to the current job, but to prepare for the future.

In the dynamic world of telecommunications, the Communications Workers of America and the International Brotherhood of Electrical Workers have bargained with AT&T and the "Baby Bells" for retraining programs and guarantees that new jobs are filled by current employees. The Alliance program offers employees mobility into high-skilled positions. In Pacific Bell, joint training advisory boards project future job trends, select training sites, review and approve curricula, and decide key issues. By planning in advance they design programs to minimize layoffs. The union and company have also designed a computerized job



Edward Fort (left) and Hunter Rawlings

bank that tracks employees as they gain their new skills and matches them with openings in higher skilled positions. Workers are advised of growing job fields and can get specific training to qualify, and are informed when openings occur. As a result, the company seldom hires from outside with the exception of entry level positions. Some of the "Baby Bells" also offer tuition reimbursement prepaid by the agreement.

With regard to apprenticeship—many people talk about apprenticeship but not too many really understand how it works. Most of the programs in the building trades industries require three, four, or five years of on-the-job training and related instruction before an apprentice becomes a journeyman. The program is bargained and funded by the industry and administered by a local joint labor/management committee. The local committee also sponsors special journeyman upgrading programs so that members can keep up on the new technology being introduced almost daily into many of these occupations.

Before any training can be offered by the joint apprenticeship committee, the instructors must be trained and qualified, usually through special programs in conjunction with some of your institutions. The industry very often brings in the latest equipment as teaching materials so that instructors can recreate job site conditions. They also offer training for foremen and superintendents so they can be more efficient for the contractors and better prepared to function as a direct link between the worker and employer on the job site.

On the other hand,the youth apprenticeship program is modeled on the registered

"Universities must help America to remain competitive"

Shirley Baugher

apprenticeship program. It will prepare young people to move forward into a different level of work. It will not substitute for the registered apprenticeship program. And, in truth, there is much concern in our apprenticeship community that people will assume that when a youth finishes this program they will be eligible for the same kind of jobs and the same opportunities as those who have gone through the registered apprenticeship. As we envision it, they will be prepared to enter registered programs if they so desire at a different level, but it will not be a substitute.

Hazardous material training is a relatively new area of work and requires 80 to 120 hours of training for instructors and at least 40 hours for workers. One special training program in Pomfret, Connecticut, integrates basic skills courses with hazardous material training to prepare members for jobs in this area. The program also offers members a strategic plan for lifelong learning through a career path in education and work experience in the environmental industry. And the laborers' joint program philosophy states: *"A career path of lifelong learning and work must enable workers at every level of the industry to work, grow, aspire and achieve contribution to the industry as well as self-fulfillment."*

The vision for the career path system delineates a model that would permit entry from the formal education system, allow for education provided by the schools, and provide academic credit for training and work experience. The system must provide for individual skill certification and must be recognized as legitimate by various government and private accreditation and certification organizations. Their goals are to achieve formal public recognition of the training system and the individual worker, to keep quality people in the system, to provide for an adequate number of skilled workers in the pool at all levels, to improve the quality of work life of laborers throughout the system, and to preserve and expand a human resource of value to people in our industries.

Many of the lessons learned from joint union management programs and/or union administrated programs were outlined in our manual: *Work Centered Learning—A Union Guide to Work Place Literacy*. The principles are: address the needs of the whole person; give workers and their union a role in the planning, the decision-making and the design of tests; assure equal access; confidentiality of records; reflect the diverse learning style of adult workers; and integrate basic skills into a larger strategy for adapting to change in the work place. This last point is most important. We must connect our training with the restructuring of the work place, into learning places with career paths for workers just as the laborers are doing. No one wants to spend weeks, months, or years in training to be treated as a mindless robot in the work place.

As you can tell by the descriptions of these labor programs, partnership with higher education is a given in most cases. That partnership, however, can be difficult to forge and must be sensitive to the needs of both institutions. For academics who do not have personal union experience, working with us can be a challenging learning exercise. Unionists feel passionately about certain issues drawn from their very practical experience, and they react strongly when that experience is not considered as significant as the theoretical arguments at hand. Unionists are

Unionists feel passionately about certain issues drawn from their very practical experience, and they react strongly when that experience is not considered as significant as the theoretical arguments at hand. Unionists are workers and they are politicians.

workers and they are politicians. They run for office in a representative, democractic system. They want to see their organizations and their voices recognized and represented in community councils, on university forums, such as this one, on trustee boards, and as a legitimate partner in the economic community. We have a long way to go to achieve that partnership but labor, too, must make more efforts to increase communication and strengthen working relationships.

With that goal in mind, ten years ago we created the Labor Higher Education Council, a formal partnership with the American Council on Education and the AFL-CIO. Meeting annually, we have explored some pressing national issues of mutual concern. We need to do more of that, and I believe this Forum is another step in that dialogue.

The United States is at a point in history where we can seize the moment to change the course and priority of the nation. We have consensus that we all have to share in the contributions necessary to make real change. We all basically want to make life better and to make that improved life available to all our citizens. Labor may have a more formal organizational structure to advance our goals, but higher education surely has the same vision. We are all about reinventing our society, and we can't do it without a cooperative and collaborative relationship. And we share the same commitment to seek ways to provide improved access and find new ways to transmit knowledge through our technology and teaching. We both, in labor and higher education, are key to building learning organizations at the work place, in the university, and in the community colleges. And we look forward to continuing to work with you in that interactive partnership with us to create a secure world for the future.

REMARKS BY

MANUEL PACHECO

PRESIDENT
UNIVERSITY OF ARIZONA

When foreigners are asked to indicate the three aspects of American society that they most admire, pride of place usually goes to our military technology, our popular culture, and our universities. But unhappily for the universities, the American public holds a different opinion. As Derek Bok forcefully reminded us last year, we have lost much of the trust and confidence of the American public. Americans are no longer convinced that our universities are making significant contributions to their social, cultural, and more significantly for present purposes, their economic lives. There is a widespread belief that we run our institutions for the good of the faculty, not

for the good of students and society at large. Popular opinion holds that we are not responsive to public needs, that we pay too little attention to undergraduate teaching, and that our graduates are ill equipped for the contemporary work place.

We need to pay close attention. Even if these complaints reflect perception rather than reality, we need to be concerned because universities must have the confidence of the public if they are to be truly effective. We ought to be even more concerned if these complaints reflect reality itself. Our nation simply cannot afford a defective higher education system.

In the modern world, a well educated population is essential for national competitiveness and national prosperity, and prosperity itself is equally necessary for an improved quality of life. The public has high expectations for the universities. We need to expect at least as much of ourselves. If America is to flourish in the coming decades, it will take a concerted effort, by governments, by corporations, the education system, and community organizations. All have a part to play in insuring economic prosperity as well as insuring our common cultural and social well-being. It is my belief that the public and private organizations most effective in this effort will be those who discover how to tap people's capacity to learn and relearn and how to engage people's capacity to commit to worthwhile causes. For these reasons I suggest that our universities need to promote two central propositions: that a prosperous society is a learning society; and that partnerships with the private sector to enhance economic prosperity will be one hallmark of great universities in the next century.

The future appears to lie with networks of participatory management as front line workers take much more responsibility for quality control, for innovation, and for decision making. These new arrangements appear to offer the best prospects of greater efficiency and enhanced competitiveness.

Now, one estimate is that 90% of American companies still employ turn-of-the-century work systems. Production efforts are broken down into simple rote tasks. Workers are expected to repeat these tasks with machine-like efficiency with little regard for what goes on beyond their immediate job. We can see variations on this theme on every scale of production from our local McDonalds to the giant automobile plants. It is a system that historically has called for workers to be hard working, dependable, and compliant. Such old-fash-

Howard Martin makes a point

ioned, hierarchical management is strongly persistent, but it runs directly counter to more current and more promising ideas. The future appears to lie with networks of participatory management as front line workers take much more responsibility for quality control, for innovation, and for decision making. These new arrangements appear to offer the best prospects of greater efficiency and enhanced competitiveness.

The classic case is the Intel Corporation. Eight years ago the company was relying on traditional, old-fashioned arrangements and it was almost defunct. Today, after seven or eight years' experience with the new ways, Intel is flourishing as the undisputed world leader in the microchip industry.

Manufacturing and service firms alike can benefit from these new ways of organization—so too can universities. It's rather ironic that our universities, which think of themselves as bright and forward looking, still cling to the old fashioned methods of top-down, hierarchical management. The new ways, of course, call for a very different kind of work force. In order to succeed, they must have workers who are capable of understanding complex relationships, who can see the broader context of their personal efforts, who remain alert to possibilities of improvement, and who are accepting of change. This new style of work force can be created only through large investments in education and training and investment also in the higher levels of pay which

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Thomas Bartlett

reflect enhanced ability. Fortunately, experience shows that these expenses can be repaid through the enhanced quality of the product and through greater efficiency in a more competitive firm.

America's greatest contribution to world education was made a little over 100 years ago when we invented the land-grant university. It was a revolutionary and distinctively American idea. Faculty members were expected to divide their attention between the traditional pursuits of knowledge and the practical application of that knowledge for the economic good of the nation. In those days that practical application was predominantly in fields of agriculture and mining.

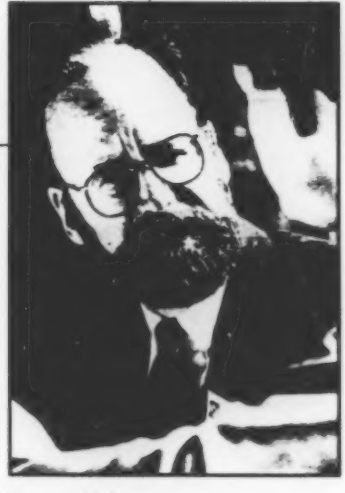
Today we live in a different world. And, as I have indicated, the American public is not convinced that the universities fit into it as well as they should. In particular, the public is not convinced that our graduates are best suited for the working world. Historically, the universities have influenced the working world in a variety of ways—in the major research universities at least. We usually tend to dwell on the impact of research as reflected in new products and new processes. All universities, however, affect the economy in varying degrees through the quality of their graduates and through their off-campus teaching. If we are to have a maximum impact on the national economy today and tomorrow, we need to pay greater attention to all these areas and be alert to promising new areas.

I want to review several selected developments that illustrate the breadth and variety of the choices that are available to us. Let me begin with a program that is relevant to a comment made by the Commission on the Skills of the American Work Force when it noted that we have the worst system of school to work transition of any advanced industrial nation.

In upper New York state, several universities and colleges work with Cornell Cooperative Extension in Broome County in a youth apprenticeship program. The objective is to help high school students to appreciate the links between formal education and paid employment and to do this through practical experience. Participating employers indicate what academic knowledge and skills are necessary. Once this

The American public is not convinced that the universities fit into today's world as well as they should. In particular, the public is not convinced that our graduates are best suited for the working world.

knowledge and these skills have been acquired in school, young people can then be apprentices in a practical work training experience. As they become both workers and learners, everyone benefits. Individual students are better qualified for employment following high school. Employers have a better trained work force with a more realistic attitude toward work knowledge and skills. And the colleges and universities benefit because the students come to realize at an earlier age that further education is the key to higher level employment. Young people see that the right education can permit them to move beyond engineering technology apprenticeships to careers as engineers. Office technology apprenticeships can lead to careers as systems administrators, and health care apprentices can become nurses, medical technologists or physicians.



Duane Dale

New information is economic power. The days are gone when a new graduate left the ivy covered walls, went to work, and was done with education forever.

At the University of Kentucky, the American Private Enterprise Program links schools, 4-H programs and businesses in a program that has introduced more than 10,000 young people to the working world through small scale experiences in private ownership, partnerships, corporations, and cooperatives. Similar programs exist in Illinois, South Carolina, Nebraska, and a number of other states.

Turning to undergraduate education, at the University of Arizona, the College of Business and Public Administration offers a senior year program in entrepreneurship. Participants complete an integrated set of courses as a group, and in teams, they develop a full-fledged practical business plan for a proposed new product or service. These proposals then are assessed by a panel of experienced entrepreneurs drawn from the Arizona business community. A number of these student proposals have been financed and now are contributing to the economy. I might add that one of these is being implemented in Mexico at the present time so there is an international dimension to this too.

At Kansas State University, Extension is linked with the Mid-America Manufacturing Technology Center in a five year-old program called Kansas Direct. The program responds to over 100 requests each month for assistance from business and industry. It involves university faculty members in devising solutions to problems encountered in manufacturing, technology, management, finance, licensing, taxation, and supplies.

The Extension program at the University of California at San Diego has a program that focuses on high technology industries. Approximately 100 emerging high technology companies are members. Through the program, the companies are able to exchange information, contact sources of venture capital,

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Faye Richardson-Sandsbury (left) and Carolyn Carter

develop contacts with potential partners worldwide, and be educated on legal, financial and marketing issues.

The manufacturing technology transfer program at the University of Wisconsin-Oshkosh provides industry with in-depth consultation and direct services and computerized plant lay-out and facilities planning, materials flow and handling, management, quality assurance, and preventive maintenance. At Pennsylvania State University, the Pennsylvania Technical Assistance Program (PENNTAP) arranges for faculty members to respond directly to engineering, scientific, and technological questions raised by industry. And I might add that no fees are charged for this.

More than 100 universities nationwide have established technology transfer programs to shift their new ideas to the work place with minimum delay. At the University of Arizona, for example, approximately 20 new companies have been established on the basis of discoveries by our faculty members. A recent study by the National Association of State Universities and Land-Grant Colleges has shown that about $100 million a year is devoted to this kind of effort. And just in case you find this figure impressive, let me mention that Japan supports almost 200 technology extension centers with a staff of over 7,000 people and a budget in excess of over $500 million per year.

Taken as a group, these

examples illustrate immense variety in the ways our universities are linked to the working world. These linkages range from helping high school students to appreciate the practical advantages of formal education to arrangements for transferring sophisticated new technologies to the shop floor. They can provide undergraduates with practical, work-focused experience and help management to solve knotty problems of technology or work control.

In all these ways, universities are directly contributing to the economic strength of the nation. And I have not even mentioned the courses we provide for workers and management alike, whether taught in person, or through video or other forms of distance teaching.

What does all this mean? Certainly it confirms the necessary reinvention of university extension and outreach. That's how we can meet the distinctive needs of the late 20th century and, presumably, the coming century. Frequently, but not always, these services involve Cooperative Extension units in the land-grant universities and colleges. Long experience in a time when America was predominantly agricultural and rural has provided a foundation for reaching out to widely-scattered consumers of education. It's interesting to me that we use an outreach mechanism that is inherently based in the colleges of agriculture, but, as far as I can determine, we have not been asking ourselves if this is the best way to help an urbanized industrial society. It may be. Setting aside this prosaic matter of administrative location in the university, what do all these programs and linkages mean?

To me at least, they represent an implicit recognition of two truths. First, the working world needs the universities as sources of up-to-date information because knowledge is fleeting. Second, education itself is equally fleeting and updated personal knowledge and skills are essential to remaining an effective worker.

These points are worth a little further exploration. Much and, perhaps, most knowledge has a limited half-life. Just a few years ago it was fashionable for teachers of physics to tell their students that most of what they learned would be obsolete in five years. I can't vouch for the five years, but certainly this kind of thinking has become more general, not only in technical and scientific fields. Most disciplines, most areas of knowledge, constantly remake themselves on the basis of new discoveries and new ideas. It follows that any industrial business or service industry must stay in touch with new information and new ideas in order to remain competitive. This is true whether we're making microchips or managing large computer databases, or, as Jack In The Box recently discovered, merely cooking a hamburger.

New information is economic power. The days are gone when a new graduate left the ivy covered walls, went to work, and was done with education forever. Today, personal interest and corporate interest combine to make lifelong learning an absolute necessity. The individual worker needs to update knowledge and skills to remain employable and to progress in a

William Schreyer (left) and Jim Christenson

career. And corporate self-interest demands knowledgeable workers for the sake of competitiveness.

Over the last ten to fifteen years, universities were somewhat surprised when they found that they no longer catered strictly to the 18- to 22-year-old. The average age of our students has moved up into the mid-20s and, in some instances, much higher than that. Our student bodies include increasing numbers of a more mature age. I daresay that we shall be equally surprised over the next ten to fifteen years when we realize that we are no longer catering to on-campus students of whatever age. A powerful combination of new teaching technologies and the widely disseminated need for education will transform much university teaching.

Do not misunderstand me. I'm not forecasting the end of the traditional campus, but I am suggesting that in the future many more classes will meet in factories and individual homes. I already see this at my own university. A few years ago it was unthinkable that a faculty member in electrical engineering could stand on campus and teach courses to students in a manufacturing plant ten miles away or an Army base 60 miles away. Today, it's a matter of routine. And tomorrow it will be common across many fields. The selected programs that I noted show how we have energized some old methods of teaching and created some new arrangements.

The key point in my estimation is that all of these schemes represent partnerships. In some cases, the university is linked to high schools—in others to the corporate world. If lifelong learning is to be a reality, the universities cannot go it alone. We have to work with others, partly because that's how we obtain access to students and partly because that is how we can meet the costs.

My vision of the future includes universities that are increasingly involved in lifelong learning and increasingly involved with off campus audiences. For the good of the nation we have to be prepared to join in partnerships that improve the capabilities of the individual worker and enhance the economic prospects of the corporation. In effect, the wheel has come full circle, we have to reinvent and extend the land-grant university as the twenty-first century model. We cannot go it alone in this effort, and we need to remain alert to better ways to organize, fund, and conduct these essential activities.

REMARKS BY

ROGER BULGER

PRESIDENT
ASSOCIATION OF
ACADEMIC HEALTH CENTERS

Many of our schools and institutions are populated by people who were brought up in the reductionist's biomolecular tradition and who have seen the fruits of that tradition. Their objective for five decades has been to find the gene that caused a problem that in turn was associated with an enzyme and then a protein, a single molecular defect and then try to find the molecular intervention that would solve and cure that disease.

Now, we're about to see unfolding before us over the next decade the genetic replacement therapy that can, in fact, prevent the disease. We'll see ourselves going to physicians to be treated *before* we get sick. That raises serious questions about how we are going to manage the finances of health care and, I think, also means that we can no longer have a fragmented, segmented experience-rated approach to health care.

In other words, if they could look at our genetic makeup, one could take the healthiest ones of us and say "OK, we'll give you one rate." And then take those that are likely to have more disease—which will be more

Thomas Payzant

predictable in the future—and charge something else. All of these things are coming together around the issue, or set of issues, that I was asked to talk to you about. And I will break those down into three general categories or approaches.

One is an action agenda where a particular problem and issue can be addressed by the university in collaboration with various elements of the community. I have found, and the reason I started off the way I did, is that it shouldn't. The leaders of our academic health centers don't know what's going on in health promotion and disease prevention within their own centers. And that was illustrated in a task force that our organization had on that very subject with ten of our members who had an interest in health promotion and disease prevention, and yet they, in fact, could mention very few things that were happening. They decided to go back to the campus and find out what was going on. They came back at the next meeting and all of them said, "My goodness, there is a phenomenal amount going on."

With that meeting we then decided to do a study and visit six centers around the country. We found that what was going on *was* really quite phenomenal.

The bottom line of all this is that intervention was tremendously valuable. When we presented these findings at our annual meeting, those in attendance went back committed to doing the same thing on their own campus. They were, in effect, empowering people who had been doing some things in health promotion and disease prevention to come forth and say so.

But more than that, it allows the institution to catalog what it is doing. And I guarantee you, if you go back to your institutions you'll be able to say the cup is half-full. Or a quarter-full, or a third-full. However full it is, this will also allow you to look at what isn't there. And that, in turn, will allow you to have a more fruitful discussion with the community looking at the burden of illness of the particular community that you serve and looking at what their interests are, what their desires might be, and then being able to place them in a context with what your strengths are and try to take out a better strategy for doing the things that are now not done. If we all did this, a lot would happen.

We're now talking about creating universal access in health care. But what we're doing is figuring out how to create universal *coverage*. And I would simply assert that universal coverage is *not* universal access. When we're done giving everybody coverage so that they can pay for care, there will still be X millions of people who can't get it because there isn't anyone there to deliver it, or to deliver it adequately. We're mostly talking

about out of hospital, primary preventive and promotional care.

Anyone in America that falls down very sick goes to the hospital. If they can't pay for it, the hospital charges the people who can. So, in a way we have universal access to acute hospital care. It's not perfect. But what we're talking about now is how do we reach the people with prevention and health promotion and those sorts of ambulatory services that they now don't have? And there will still be millions of people that won't have it when we're done with putting universal coverage in place. Health promotional activity will help with that.

At a second level, the most striking event that has happened here is that we are moving toward the position where the patient is in charge. The patriarchal-authoritarian physician/decision-maker is dead and buried in principle. While many may still be functioning that way, we're moving away from that.

So, we've placed it in the hands of the patients, we've placed the decisions out there and people are not very well-equipped to deal with it. When you get to the last year of life, how do we let go? I have an English friend who comes to America every year and says the same thing—the difference between the United Kingdom and America is that in America you believe that death is an option. And that's serious. We think it's optional. And we prolong it as long as we can. And then we leave it to people who can't deal with this to make the decision and take their 135 year-old grandfather off the dialysis machine.

We have placed ourselves in a terribly difficult situation. Universities through the exten-

Carol Cartwright

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sion program should undertake, and be certain that, the health policy issues are considered in a systematic and meaningful way and in such a way that draws together the faculty resources of the whole university, but also includes the population. We must involve the people in understanding what they are doing and in the decisions, the votes they are invariably going to be making over the decades ahead about some of these difficult issues.

And the last point I would make is the most quixotic. America is attached to technology, the technology that we have. The most successful industry we've got right now are the drugs and the technology of medicine, and they are driving the costs up in part. And we're looking for somebody to blame. Well everybody is at fault—the doctors, the hospitals, the pharmaceutical companies and our policies are at fault, with perverse incentives. But at the heart of it all, when we fix those we're going to find that the public's attitude and demand for services and requirement for the latest in technology is very basic to this and very different from the rest of the world. And it is a part of where we are.

Christopher Lasch talks about progress, the death of the concept of infinite progress, materialistic progress, which is so much a part of America and that society has to deal with limits. We're very good at figuring out what we think or what we think we think. We have surveys almost instantaneously about that, but we don't really take on the issue of how do we change what we think. And I believe that we can't turn to the universities to ask them to ask the public to face themselves and face what it is that they want from the society. We're not going to get to the next level of active participation on the part of the public that we really need. They won't understand what some of the rest of us seem to be understanding.

With that let me say that regardless of whether the universities do get into this, some change is going to occur that will reshape the whole health care environment. This could be one of the most exciting and productive — if anxiety producing—times in the history of health care in our society. And if you agree with me that this is a time when one can use health care and the questions it raises to ask some of the deepest societal questions that confront us in a general way, then we might in fact be able to use health care, your academic health centers that perhaps have been too long mired in the past, in a more productive and constructive way. We can help them to change along the way, become equal partners with Extension actually, and to become more willing partners in outreach than they have been in the past.

REMARKS BY

PAUL HARDIN

CHANCELLOR
UNIVERSITY OF
NORTH CAROLINA–CHAPEL HILL

I was in the private sector until a few years ago, but when I came into the public arena of the University of North Carolina, I discovered that outreach to the people of your state is an absolute necessity. The less money the state has to give you, the more they want you to account for what they do give you. This is a matter of life or death for us. We need to make sure our federal research grants come back home and help the people of our own states.

In the ideal university world, it is hard to distinguish between teaching, research, and public service. The program I'm about to describe, the Area Health Education Centers Program (AHEC), is a unique, full-dimensional outreach program by which education is exported to centers of primary health care throughout the state of North Carolina. Advanced medical students, interns, and residents go into these centers to gain practical experience in their chosen professions. This experience is gained under the supervision of permanent UNC faculty.

William Schreyer (left) and Jim Christenson

In addition to conducting community-based programs for students in residence, AHECs are major providers of continuing education and clinical consultation services in small towns throughout our state. The AHEC's network for library and information services is outstanding—it is linked to four academic health sciences libraries and to each of the smaller hospitals, health departments, and mental health centers that are involved in the AHEC network.

The program is designed to expose students and residents to community practice and to bring the academic process to underserved, rural, and inner city areas. This increases professional support in these areas, making it more likely that communities can recruit and retain needed practitioners while keeping them up-to-date.

Although our program has been tailored to meet the needs and culture of North Carolina, we are proud that the principles and philosophies of the program are compatible with those of the 1970 report of the Carnegie Commission on Higher Education that first described the Area Health Education Centers concept. Our AHEC has become a model for similar programs throughout the United States.

In the 1960s, many schools of medicine had outreach activities in community training sites that resembled a hub and spoke model emanating from the school of medicine. The unique characteristic of our AHEC program is that we have created nine regional education and training centers—nine hubs with spokes going out to every corner of North Carolina. Each one of these centers is called an Area Health Education Center, or AHEC. Each serves as a hub for its own spokes.

All four of the Academic Health Science Centers in the state are partners in the program. UNC,

The AHEC program is designed to expose students and residents to community practice and to bring the academic process to underserved, rural, and inner city areas.

Duke, East Carolina, and Bowman Gray are each partners with one of the nine regional AHECs. Our UNC School of Medicine has oversight over the entire system and works directly with the remaining six AHECs. Each AHEC is geographically separate from its academic partner and this separation ranges from 30 to 220 miles. Each AHEC is governed by a community-based corporation that is legally independent of its academic partner. In other words, the AHECs are *not* governed by Chapel Hill but by community-based corporations. The partnership is grounded in a five-year contract, an academic affiliation agreement, and an annual work statement that sets out performance criteria for each year. The central AHEC office on our campus allocates state appropriated funds to the AHECs through this five-year contract in the context of the annual work statement from each of the AHECs.

Each of the AHECs is located on, or near, the campus of a regional hospital and has excellent academic facilities, including classrooms, faculty offices, libraries, auditoria and clinical training facilities like family practice centers. The state provided $24 million to build these facilities in 1974 when $24 million was a lot of money. This amount was matched by community funds, and all these facilities have been maintained by local funds for the past 20 years, after having been constructed on a matching basis with state help. Each AHEC has full-time faculty and staff based at the center.

Ann Thompson

Recruited mutually by the AHEC and the appropriate department of the university medical school, these faculty members must meet the standard criteria for faculty appointment, promotion, and, when appropriate, tenure, even though they are in the regional AHEC setting. There are also more than 100 full-time faculty in the AHECs in the other health disciplines.

Each AHEC has a substantial and a relatively stable fiscal base. The state appropriation for AHEC this year is about $31 million. Since 1974, the state has invested almost $400 million in the program. State AHEC funds are allocated to the AHECs with about 10% staying on our campus to support the outreach work of the academic departments in our schools of medicine, dentistry, public health, pharmacy, and nursing. In addition to the $31 million state appropriation, the AHEC program benefits from approximately $40 million each year in local revenue, including clinical revenue, continuing education revenues, grants, gifts and the like. So each $3 of state appropriation yields $4 in local support for the Area Health Education Centers.

The program has no sustaining support from the federal government although its very existence was catalyzed by an $8.5 million federal contract between 1972 and 1980. One special resource for the program is our medical air operation, MED AIR. This service consists of six twin engine aircraft and six full-time professional pilots who daily fly faculty and staff to large and small towns for AHEC-supported activities. Last year MED AIR service flew nearly 650,000 passenger miles, mostly in service to the AHEC.

Although AHEC is principally an education and training program, it is also a major provider of patient care services, especially for the medically indigent, a terrifically important outreach audience for North Carolina at this time.

AHEC began as an education program mainly for residents. But now all health sciences students at UNC Chapel Hill receive AHEC training during their student years. For example, each UNC medical student has about one- third of his/her clinical education conducted away from the university, out in community hospitals and ambulatory care settings via AHEC. Each pharmacy student at North Carolina spends a full semester in one of the regional AHECs, because it isn't enough to work in

a hospital- based pharmacy. Students need to sample chain pharmacies and independent pharmacies in small towns and mid-sized towns as well, and this has been incorporated into the pharmacy curriculum in our school. UNC students in nursing, dentistry, public health, and allied health also have AHEC experiences built into their curriculum. And one school that's not in the health sciences side of our campus, the school of social work, provides an AHEC opportunity for every single one of its students. So, the impact of AHEC on our resident students at Chapel Hill is phenomenal.

University-based, primary care residents rotate among the AHEC settings. Also, AHECs have their own primary care residents on site who are taught by AHEC-based faculty, augmented by the Chapel Hill faculty who visit the AHEC centers to work with the residents, the staff physicians, and the students.

Cecil Keene

The Area Health Education Centers program annually sponsors, or co-sponsors, 5,000 credit continuing education programs that enroll over 110,000 participants. Last year, these programs were held in 80 of our 100 counties. There are also thousands of technical assistance contracts each year between AHEC-supported faculty and community practitioners, ranging from management to systems design to planning and evaluation. These technical assistance activities are analogous to the same activities of an agricultural extension service—technical assistance on the scene to the community practitioners out in the field.

In addition, faculty in the clinical subspecialties regularly travel to the small towns throughout our state, literally going out from these hubs to care for patients close to their home. And since AHEC is an academic program, these faculty are usually accompanied by combinations of students and residents.

Already, AHEC has created an extensive library and information services network. Each Center has an outstanding health sciences library which serves the hub of a network that is computer-linked to one of the four university health libraries and outward to the smaller hospitals, health departments, and mental health centers that are involved in the AHEC program. This network provides both print and non-print

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information both at AHEC libraries and via circuit librarians. The network is also the source of the training of practitioners in the use of information technologies.

Other services of AHEC are health careers awareness and recruitment with a special focus on minorities. AHEC conducts workshops for public school teachers and staffs, including guidance counselors, health occupations teachers, and math and science teachers. We are trying hard to create an awareness of the opportunities in the health professions, particularly among minority students.

Off-campus degree programs are a major new thrust, whereby faculty travel on a regular basis, usually weekly, to teach groups of students in community settings over a defined period of time, usually two-to-three years. Current off-campus degree programs include: a Master of Public Health in two areas of our state; a Bachelor of Science in Nursing in five areas of our state, conducted by five different nursing schools in our UNC system; and a Master of Science in Nursing conducted in two parts of our state by our nursing faculties. The participating cohorts of students are community practitioners who take release-time from their private practices or their agencies. They pass through all the usual admissions requirements of the university. But they matriculate and attend all classes at the AHECs, not on our campus. Upon completion of the program, they receive exactly the same academic degree as if they had been a student on campus.

Linda Nierman

North Carolina students and faculty respond with extreme enthusiasm to the AHEC experience. If you asked a last year student in any one of our five health professional schools, or in the school of social work what was the most important aspect of the training he/she had received, AHEC would figure prominently in the response of practically every one.

Thanks to AHEC, North Carolina is now the leading U.S. state in the absolute number of physicians settling in rural areas. Since 1972, North Carolina's rural counties have increased their physician population ratios at a rate that is substantially greater than the national average for rural counties. While AHEC is only one player in the complex of health, manpower, supply, distribution, and quality, along with the state's office of rural health and the four schools of medicine, it has made a clear contribution to that situation. For example, of all the residents in family medicine who trained in AHEC settings between 1977 and 1988, 70% — 170 people—settled in North Carolina, and 43% settled in towns of under 10,000 people.

W. Craig McClelland

Although our state has made substantial progress in its distribution of health care professionals, there has been a loss of the penetration of health professionals in some of our most rural and underserved communities in the past five years. This disturbing, negative trend is related more, we think, to the rural economy, to the disparities in the physician reimbursement system, and to professional malpractice issues.

Still, we take nothing for granted. We are gearing up to make a major expansion to our statewide classroom. We're planning to move our students and residents even further into the

underserved communities of the state. Additional efforts over the next five years will include AHEC helping our school of medicine to increase the supply of generalist physicians by allowing even more of the medical curriculum to be conducted in community settings. Specifically, AHEC will help the curriculum to move beyond the hospital setting in those nine regions into small group practices, community and migrant health centers, public health departments, and nursing homes. My father is in a nursing home in Asheville, NC, and the Mountain AHEC will very likely be conducting some classes for students in the nursing home where my father is living.

AHEC will also target education and training links to specific underserved communities that have already been singled out by the state's Office of Rural Health for the development of an organized system of primary care services. We believe that a carefully constructed introduction of faculty, students, and residents into such settings can help increase the quality of that setting for the health professions and make it more likely that the community can recruit and retain primary health care practitioners and help them stay up-to-date in their respective professional disciplines.

And, finally, AHEC will work to extend the telecommunications network that already links several of the 16 UNC campuses by developing tele-classrooms at each of the nine Area Health Education Centers and in several of the community-based classrooms. This will enhance the education of students on rotation, of residents in training, of practitioners taking continuing education programs, and of students who are enrolled in our off-campus degree programs.

Obviously, we are upbeat about North Carolina's AHEC system and we think it holds bright promise for being at the heart of health reform as the initiatives come from Washington and Raleigh. Although for some people health reform only means fiscal access to care, to others it is a fact that fiscal reform will not result in greater access to care if our citizens do not have timely, geographic access to the full range of health care services that they need. Fiscal reform alone will not result in a redistribution of health care personnel. Rather, the Area Health Education Center program can bridge the gap between the academic sector and community sector for the specific purpose of attaining a redistribution of health care practitioners by geography and by specialty, while also helping them to maintain the highest quality of practice through a ready access to information sources.

REMARKS BY

MOLLY MCCAULEY

DIVISION MANAGER
HEALTH PROMOTION & MANAGED CARE
AT&T

I'm here to talk to you today about work site health promotion. My goals are threefold. The first is to share with you an evolving model of health promotion, work site health promotion based on my experiences at AT&T over the last ten years in health promotion. The second is to heighten your awareness of the range of programs that are going on in the work site today, including a model for shared responsibility that is where universities come in. Finally,

Dolores Spikes

I'll present some thoughts about work site and university collaboration and cooperation.

In 1982, AT&T launched the planning for a health promotion program that was to begin under the umbrella of management of change. We were to look at wellness, corporate culture, and integrating results that would benefit both the corporation and the individual employee. In 1982, Judge Green decreed that AT&T would divest, and we knew that we were on the edge of a very major change in our organization. One of the things that has remained constant for us over the last ten years has been the definition of health promotion. And you hear the term health education and health promotion used very frequently. From our point, health promotion is a combination of activities and events that not only facilitates behavior change but helps individuals to maintain positive health behaviors.

The components of our program were, from the outset, very risk reduction related, focusing on the individual employee. It was a list of interventions about weight and stress and exercise, cholesterol, and good communications. We did have a look and the look depicted caring. The notion of caring was a message that AT&T wanted to communicate. It was a very important commitment for us ten years ago to be systematic and not to be fragmented and not to introduce programs to employees just because we thought they were a good idea, but to put choice and options in front of the employee population.

And then something happened. AT&T continued to change, and so did we, because the needs of the business and the company changed, but also because of the innovations in the profession and the field of health promotion. So, we moved to a new model. And that new model

Howard Lavine

had a very different component focus.

The new emphasis was on organizational interventions, meaning that without the support of management and the executive of the company, you're doomed to fail. Our focus was on getting management to understand the importance of health promotion, to commit not just dollars, but involvement and active support of the employee population.

We also got a new look and came up with a new design model meant to emphasize the organizational commitment we sought. In order to accomplish this we had to go after management support first; to involve employees at the grass roots; and to train them to become our eyes and our ears, our hands and our feet in the workplace so that the program was for them and not for us. The implementation model emphasized exactly the same thing. Employees were involved, management attended seminars before employees were ever introduced to the program, and our goal was to have buy in and support from the very beginning.

Do we have 100%? Absolutely not. It's a struggle. It's an education focus and it's continually being able to respond to management's questions about whether there is value in this. Does it matter that we help employees practice positive health behaviors? How can we work together to make some of that happen?

What the evolution of the model meant for us was change for the program. We went from being a facilitator group of health professionals that delivered programs to being good purchasers of community resources, bringing in the right vendors for the right programs based on the

needs of the employee population. We went from merely assessing risk to managing risk, to focusing on high risk and attempting to change employees' behaviors

C. Peter McGrath

through support and motivation. And by putting in options for change and giving them choices, we were being responsive to the customer. The customer is the employee, and we went out and secured their "business" by presenting them with good business cases about the reasons for health promotion in the company. We no longer are deliverers of programs, but we're consultants to the business. And last, but not least, health promotion will not be viewed as a corporate perk, but as a business strategy—that good health is good business and a viable business strategy.

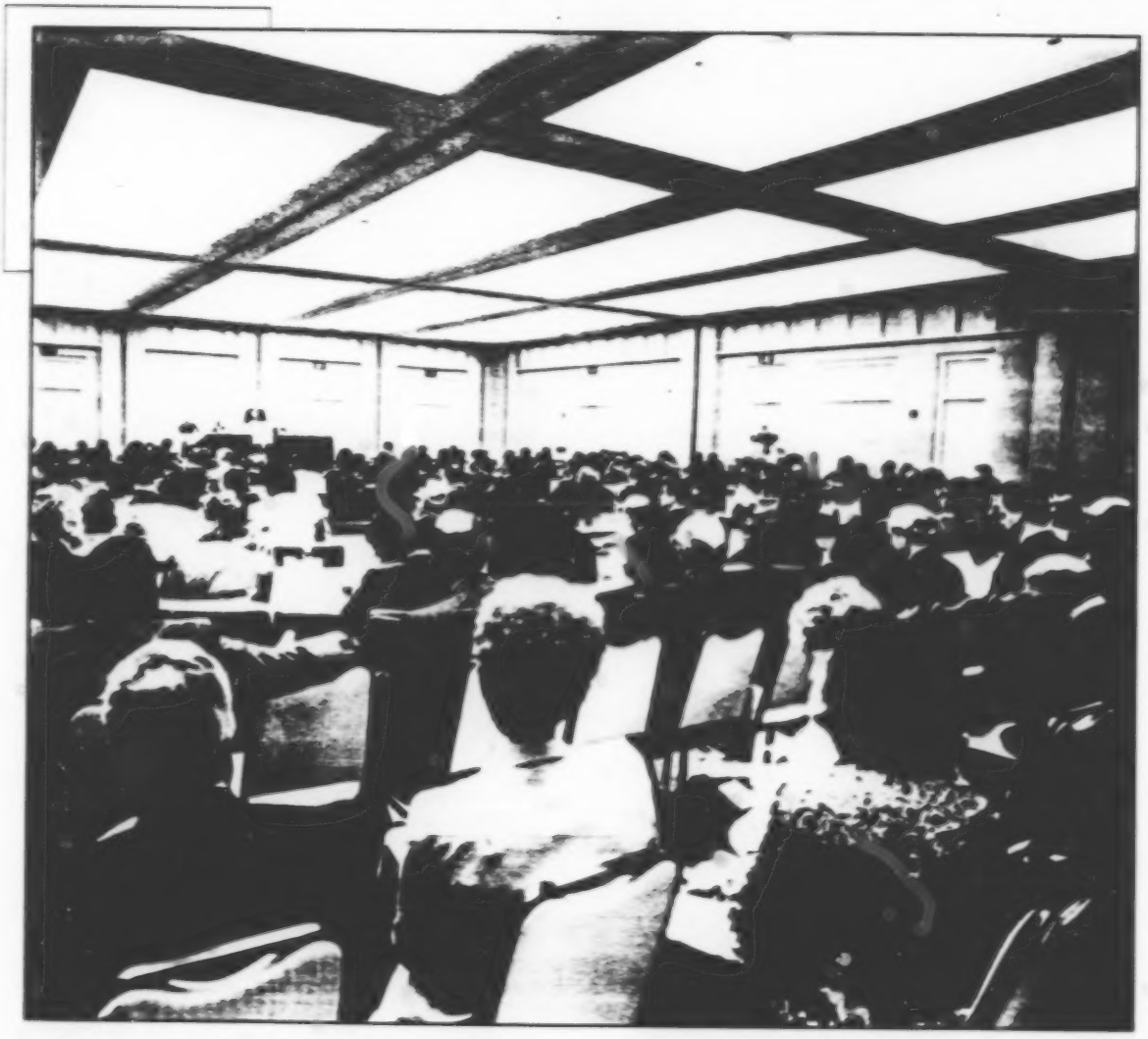
This approach spelled change for our staffs, meaning that they went from being real health specialists to being business people, to having to market and sell and do budgets and be accountable for revenue, whatever our expenditures. And so it was a very different way of doing business for us as health professionals, and it changed the focus for our staffs who became trainers and facilitators and no longer were teachers of health subjects.

It also forced us to focus on corporate concerns. Corporate America has a lot of concerns for the economics and the profitability of the business, the return on investment and MOI, health care costs, employee attitude. How do employees feel about the businesses that they work in? About cross integration—no longer working in your own department but working across departments to be successful? Supporting corporate values? Emphasizing teamwork? And assuring that we're part and parcel of support of any health care reform that comes along?

Which brings me to a model for shared responsibility that has emerged in my work and in my thinking. It is not the model of the 1990s that will take us into the 21st century. It is the model of the 1980s where everyone worked in their own cells—business worked in theirs, everybody outside worked in theirs and the individual person was left on their own. My emphasis is on a model for shared responsibility of the 1990s and into the 21st century which requires that we all have to work together. There is an overlap both inside the business, across what I call external, and outside of the business. But legislation, regulators, including research in academea, as well as the individual, family members, friends, the community, the social activities, and social groups are *all* part of this model simply because none of us can go it alone. We will not come out of the health care crisis if we isolate it as something that somebody else is responsible for.

Collaboration and cooperation is not about giving or taking, a reaching out and taking with nobody else giving to me. It's communicating and working together, a win/win situation. I believe there are opportunities for joint research. Universities and academic environments have excellent researchers, wonderful

Health promotion will not be viewed as a corporate perk, but as a business strategy—that good health is good business and a viable business strategy.



databases, and there is the opportunity to work together. Managers consistently ask "Why should I do this, what's the bottom line?" We will continue to need good evidence that there is value in promoting good health and educating employees to capitalize on the capabilities that exist in university settings. There is an opportunity for shared training.

The need for ongoing continuing education is critical, especially training for teachers and professors so that they, too, can be advocates of good health promotion practices and seek ways to incorporate that into the curriculum. Bringing outside expertise in could also be an opportunity for resources for the university—joint sponsorship of community programs, screenings, prenatal programs, community outreach programs—you don't have to do it alone, and we don't either. But we should be

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doing these and other kinds of things together: joint support of legislation and the incorporation of health as an element in your executive education programs. We have taken the opportunity at AT&T to do that.

We also have a segment in the program that helps managers understand that good health is good business; that there is a link between health, performance, and productivity; that there is an importance to teamwork, to communication, to understanding how we work together, what makes us tick, so that in difficult times we know how to manage people. And that management style greatly impacts the health and well being of the employees.

At AT&T, we also do an exercise called good boss/bad boss to think about the best and worst boss you ever had and think about your behaviors and your health practices and what happened to you under those circumstances. Management style does make a difference.

I don't know if you've ever had a health professional in your NELD internship program, but perhaps that would be a good idea.

And, finally, incorporating health promotion for the students in your schools so that someday, we won't need work site health promotion. Everybody will come to the work place healthy and vital.

I would be remiss if I did not talk about each of us having a personal responsibility for our own health. We are responsible, and we must act to be healthier and to support our personal values of health. We are all in this health crisis together, but we can't do it alone. We need role models, we need support, we need it in our society, we need it in our environment, we need it from each other. So, we must begin with ourselves, and we must begin by selecting and practicing good health behaviors. I thought that because this was a university group I could give you a homework assignment. Your homework assignment is that, periodically, when you think about this Forum and my talk, ask yourself this question. "If I was accused of being healthy, would there be enough evidence to convict me?"

REMARKS BY

DOLORES SPIKES

PRESIDENT
SOUTHERN UNIVERSITY SYSTEM

Water, Air, Land. Three natural resources often taken for granted but upon which life depends. The exploding of scientific knowledge and development of more advanced and refined instrumentation enable scientists to better understand the many interactions which either adversely or positively affect these resources. The availability of mass communication technology to transmit this information, and interpretations to lay people, awaken an increased

Alfred Wade (standing) introduces a panel

sensitivity and concern for the environment.

Environmental issues today encompass a much wider array of issues than that of the basic resources named. Most issues are eventually traceable to one of these three in some context or another. The management of these natural resources has become one of the more serious and far reaching of emerging disciplines, embracing the long-time objective of water resource management aimed at conserving and improving the quality of inland water bodies, to the more difficult tasks of adequately and safely disposing of hazardous materials that poison the world's water, air, and soil.

There has been a continuing effort to address some aspect of the environment legislatively or otherwise over the past 150 years. The establishment of the U.S. Department of the Interior; the Forest Reserve Act of 1891; the 1972 Clean Water Act; the Clean Air Act of 1990; and a host of others along the way. States, too, have sought to address environmental issues that impact upon the health of their citizens and the ecosystems within or crossing the boundaries of states.

Air and water are now considered by most to be international commodities, and what is done to, or with, land in one part of the world can affect ecosystems throughout the world. Thus, international discussion, debate, rule making, and policy on environmental issues are on the rise as nations recognize that management of natural resources cannot be confined to local communities, states, or nations in isolation.

This nation is not lacking in issues relating to the environment. Because of the complexity and diversity of these issues it

may be helpful, though admittedly simplistic, to discuss the primary issues for each of these resources—water, air and land—separately.

All across the United States, and in many other parts of the world, the availability of suitable water and land has become as great a concern as water and soil quality. This availability is a major issue from the perspectives of economics, politics, and the quality of life. For example, wells must be dug deeper to find water in the Midwest, New Yorkers are building bigger reservoirs to meet expanding needs, seawater is encroaching upon fresh ground water in Florida, Florida's underground fresh water reserves are being threatened with contamination by chemical fertilizers and pesticides used in citrus groves, and the drought in California has caused serious problems for the state's agriculture and economy. While these issues of availability of water resources take on increasing prominence, a study by the National Wildlife Federation found that community water systems serving more than 40 million people had violated federal water quality standards over 100,000 times between October 1986 and September 1987.

While debate on water as an international commodity continues, questions are raised about the environmental impact of removing large amounts of fresh water from systems. Concerns are expressed over altering the composition of ecosystems that depend on the water supply.

Environmental issues related to the atmosphere are no less important from an ecological or a human health perspective. Perhaps the best example of an air pollution problem that faces this nation and the rest of the globe is the potential for degradation of the stratospheric ozone layer. In the stratosphere, ozone absorbs ultraviolet rays before they reach the ground. And in the lower atmosphere, ozone is a health hazard, being the principle component of smog—and can even cause health effects in concentrations generally considered safe by the U.S. Environmental Protection Agency. In 1988, more than half of the U.S. population lived in areas where ozone levels exceeded the national standard at least part of the time. In general, pollutants are building in the atmosphere to levels that degrade the quality of the environment. More and more toxic pollutants are being released into the atmosphere. Haze, urban smog, and acid rain are some of the effects of the emission of these pollutants into the atmosphere. Furthermore, atmospheric concentrations of carbon dioxide, largely due to the combustion of fossil fuels which now supply 95% of the world's commercial energy, have a potential for global climate changes. The Intergovernmental Panel on Climate Change reported that emissions due to fossil fuel combustion must be cut by 60% from present levels to stabilize atmospheric concentrations of carbon dioxide. Yet the world economy is expected to grow at least five fold by the year 2050, and to the extent that that growth is based on the expanded use of fossil energy, the likelihood of global climate change will increase significantly.

Dan Moore (left) and colleagues get some fresh air

Environmental issues related to land or soil arise not only from pollution but also from other

human activity and natural disasters. Soil degradation from pollution occurs as air emissions settle on land and as large amounts of hazardous materials, as well as conventional waste, are disposed of both on, and in, the soil. But soil loss and degradation results from other actions too—by wind and water, aggravated by human activity and the effects of unsustainable irrigation, for example.

Bernie Jones (left) visits with NELD interns

Because land is an environmental resource shared among the host of human and other natural activities, conflicts in the use of land may arise among these activities. Moreover, competition for land use is becoming more intense in environmentally unique areas such as coastal regions and valleys. Wetland resources are threatened by recreational and agricultural development, and by industrial, domestic, and agricultural water demands. In the United States, excluding Alaska, the original wetlands area totalled between 500,000 sq. kilometers and one million sq. kilometers, but by 1950 one-third of the original wetlands had been destroyed and by 1985, one half had disappeared.

In summary, the primary water, air, and land environmental issues facing the nation include the following:

- Availability of water and the environmental impact of accommodating water needs on ecosystems that depend on the water supply;
- Pollution of underground water reserves and supplies and of inland waters;
- Degradation of the stratospheric ozone layer and the impact on plants, crops, and human health;
- Build-up of pollutants in the atmosphere, including toxic pollutants as well as traditional ones;
- The relationship between increasing use of fossil fuels in growing economies and global climate changes;
- Soil degradation resulting from hazardous and conventional waste disposal and from the settling out of polluted emissions from the air upon the land;
- Effects of human activity such

Competition for land use is becoming more intense in environmentally unique areas such as coastal regions and valleys. Wetland resources are threatened by recreational and agricultural development, and by industrial, domestic, and agricultural water demands.

as unsustainable irrigation and aggravation of natural erosion upon soil;
- Conflicts over land use.

Unless we know what the principle issues are, we can't know what the principle issues related to natural resource management are.

Let's look at some aspects of the magnitude and extent of natural resource management problems facing the nation by noting some of the goals, or resources, and aims of resource management in air water and land. Control strategies, such as the restriction of highly-polluting fuels and limits on the sulphur, lead and benzine contents of fuels; the gas treatment after combustion from stationary sources; emission controls on motor vehicles; and technical progress have reduced air pollutant emissions in many countries. Nevertheless, urban pollution continues to be a problem. Why? Well, in this country, motor vehicle fleets and distances traveled have increased at faster paces than implementation or sufficiency of emission controls. Air pollution problems remain international in scope as a result of the long range transport of air pollutants. Newly-emerging problems are reported to be adding to the challenges of providing for cleaner air. These problems include the release of greater amounts of toxic pollutants into the atmosphere, and exposure of people to indoor air that sometimes is worse than the air outside.

The Organization for Economic Cooperation and Development (O.E.C.D.) states that better management of air resources is needed to deal with local and international problems of air pollution and the goals for management of these resources ought to include the following:
- Better enforcement of existing regulations and policies and rigorous implementation of international agreements.
- More efforts concerning indoor pollution problems.
- Better knowledge of toxic pollutants.
- Better integration of air, water, soil and waste management in a cross-media perspective.
- Continued innovation and investment in respective clean technologies, product substitution and pollution abatement techniques.
- Incentives to decrease the use of private automobiles in order to reduce emissions from one of the major man-made sources of atmospheric pollution.
- Better integration of air quality concerns in the sectoral policies (energy, transport and industry) affecting air resources.
- More rigorous efforts to conserve energy in order to avert air pollution problems and potential global climatic changes.

In addition to these goals for management of air, there are some better management of water resource goals, including:

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- Stricter enforcement of existing regulations.
- Continuing investment in quantity and quality of water resources in infrastructures, and in processes and equipment to replace obsolescence.
- Concern with long term sustainable development of water resources.
- Management of natural waters and ecosystems.
- Better monitoring of water reserves and water resource accounts.
- Close integration of air, water, soil, and coastal area management.
- Water related concerns in the sectoral policies again—agriculture, energy, and industry—which affect water resources.

What we have noted here in terms of water and air and the management goals all apply to land as well: enforcement of regulations; monitoring; need for better knowledge of certain pollutants; development of techniques for integrating air, water, soil and waste management; more effective conservation policies, especially of water and energy; management of resources as ecosystems; and management of land use. Those are the principles upon which the management of resources ought to be based as envisioned by those who are experts in this area.

What do we need in order to enhance our outreach programs? The enhancement of outreach programs and resource management by universities are needed to assist policy makers; law makers, environmental leaders, technicians, and the public in realizing the aims set forth earlier. Some universities provide outreach through workshops and seminars and policy analysis. The notion of sustainable development in rich countries means steady reductions in wasteful levels of consumption of energy and other resources. Sustainable development has to do with our changing consumption patterns. University outreach programs, therefore, must do more toward disseminating information on sustainable development, on what is necessary for this nation to direct itself toward a sustainable future, and to find common ground with other nations to begin the process of change that sustainable development will require. Such outreach programs can also provide forums for policy analysts to examine and report on the nation's efforts to meet the principle aims of resource management.

Perhaps one of the richest contributions that universities can offer, however, is that of their own technical and scholarly expertise and redirecting resource development and policy makers toward the integrated approaches noted in the reports we cited earlier. To communicate to the public through outreach programs about the risks to ecological systems, as well as risks to human health, will go a long way toward gaining a public consensus on effective translation of the concept of sustainable development and to practical goals, programs, and policies.

REMARKS BY

ROSS WHALEY

PRESIDENT
STATE UNIVERSITY OF
NEW YORK
COLLEGE OF ENVIRONMENTAL
SCIENCE & FORESTRY

In putting my comments together for this presentation, I contacted the Deputy Administrator for Natural Resources of the U.S.D.A. Extension Service to seek his opinion on innovative outreach programs dealing with natural resources. I learned about the Total Ranch Management Program at Texas A&M. I heard about Pennsylvania's Forest Stewardship Pro-

gram, the University of Wisconsin's Community Water Quality Enhancement Program, and about a North Carolina A&T forestry specialists' outreach to inner city youth. In chatting with another colleague, I learned of Oregon State's coalition building between ranchers and environmentalists.

In addition, I had contacted some industry and public agency friends to get ideas from them. This certainly provided an opportunity to be provocative. I could start by condemning the academic community for lack of attention to outreach and public service. I knew if I focused on this, then each university representative here would argue that their institution was an exception. If, on the other hand, I were to praise you, then our agency or industry colleagues might ask where was the academic community the last time I needed help?

We have shifted from a preoccupation with the resource to a preoccupation with policy . . . to the need for university teams dealing with complex issues of social conflict.

Given this dilemma what I have chosen to do is to try to draw some conclusions from this collage of examples given to me. In doing so, I will discuss four points:

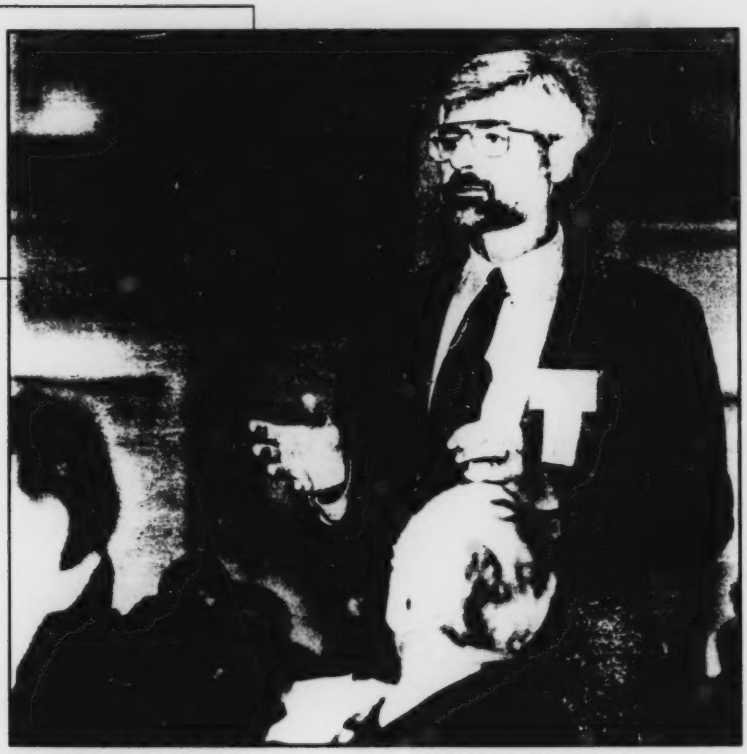
- changes in the focus of outreach programs needed to address natural resource issues;
- root causes for these changes;
- difficulties universities seem to have in responding to these changes; and
- an attempt by the State University of New York to address the difficulties.

We have moved from problems which center on the resource *per se*--how to grow it, manage it, harvest it, use it—to the more abstract policy arena of considering the environmental impacts of doing these things. That is, we have moved from *HOW* to manage, harvest, utilize, etc., to *SHOULD* we manage, harvest, etc. Some universities find the adversarial policy arena shark-infested water to be avoided for fear of legislative reprisals. Yet, I would argue that the technology transfer of much of our research in natural resources results in a change in policy as opposed to a change in a widget or a gadget. We have shifted from a preoccupation with the resource to a preoccupation with policy. It seems to me this also means that we've moved from an arena where once you could take an individual university specialist dealing with an

Rita Wood, (left), Virginia Caples, and Sue Buck

individual manager or a group of managers and have now moved to the need for university teams dealing with complex issues of societal conflict. Now, I will neither add to the criticism of the university's ability to put together an interdisciplinary team, nor will I become an apologist for our performance. And you can judge for yourself about your own institutions and your own ability to put together an interdisciplinary team dealing with policy issues. I would add a third point in terms of the change in public outreach programs related to natural resources--a shift in the audience. The audience at one time used to be located near the resource. The audience is no longer located next to the resource. It may be more urban than it is rural. In fact, we may even have difficulty defining who the audience is as we look at the public issue. It's not only the managers, it's not only the government agency, it's not only the industry, but it's all of them. And I would argue that this failure to recognize the complexity of this audience will also get us in trouble related to credibility. Failure to recognize this will be difficult if we're viewed as either being in the pocket of industry or on the funny fringe of liberal environmentalism.

So, in summary, I see three important changes--the shift in the resource itself to policy; the shift from the individual specialist to the need for teams; and the



Thomas Johnson

shift from a single interest audience to a multi-interest audience. Unless we deal with these changes, we will not be effective in outreach programs in natural resources.

Now the root causes. How did this all come about and why did this occur? I think there are three causes. The first is that there is an increasing conflict between economic growth and environmental quality. Now, there may be those of you who think that the conflict between economic growth and environmental quality is a passing fancy that will ebb and flow and somehow pops up every 20 years or so and will disappear again. And may not creep up until 20 years from now. If that's what you think, I think you're wrong. To paraphrase Herman Daley, we have shifted from an essentially empty world to a full world in the sense that the scale of human presence in the biosphere has moved from negligible to significant in the last century. Consequently, the natural world, as measured against the demands on it, has moved from superabundant to scarce. And the strain of the weary globe is starting to show. Sure, there will be technological breakthroughs, but I would argue they will be more costly and have smaller net gains than in the past. Sure there will be times when the environment will receive less attention from the press than it may today. But turn to the second section of the newspaper, and I guarantee you it will be there. And sure, there will be major shifts toward social responsibility, but the watchdogs will bark louder as the costs of error become more important.

Here we sit on the horns of a dilemma. Two legitimate, necessary social goals—economic growth and maintenance of environmental quality—seem to conflict more than they complement each other. And the strident debate between these

The natural world, as measured against the demands on it, has moved from superabundant to scarce. And the strain of the weary globe is starting to show.

While the university's role at one time might have been supplying information ... today information is almost ubiquitous and our job now is interpreting information.

goals is greater today than it's ever been in our history. The only surprising fact about it is that people seem to be surprised. I would argue that this increased pressure between world resources and natural systems was inevitable, predictable, and will get more severe.

For the two other root causes that are causing a change in the way we look at natural resource outreach programs, I depend on Harlan Cleveland in articles he wrote a decade apart. The most recent was called "The Age of People Power." It's very persuasive. Put simply, people, not their leaders, are doing the leading. And whether you view what happened in Eastern Europe, or more close to home– the civil rights movement, the women's movement, the environmental movement– the people, not a leader, have been behind the change. Citizens organize and call themselves the Sierra Club, the Wilderness Club, the Wilderness Society, the Natural Defense Fund, the Environmental Defense Fund. And when it comes to politics, according to Cleveland, people who think are notoriously ornery and inventive. And so those people involved in managing natural resources, whether in the public sector or in the private sector, get rapped on the side of the head by this group and that one. And they ask "Where did this overly financed, impetuous, ill-informed group come from? These are thinking, ornery, inventive American citizens who may just happen to disagree with the way I do things in my business or my agency."

The third point that I want to make in terms of a root cause of these changes—one that has been alluded to several times—is simply the fact that we're drowning in information. The changes in the information society are obvious to all of you. The fact that we simply transport information at about 186,000 miles per second. The fact that it's shareable—where other resources are exchangeable, this one is sharable. The fact that it's diffusive. It leaks. There's no way to have secrets anymore. The fact that in information there seems to be an insatiable appetite for it. I want more and more of it until I get to the point where I have so much that I'm caught up in it, and I don't know how to use it anymore. The point I'm trying to make is while the university's role at one time might have been supplying information, I would argue that that today information is almost ubiquitous and our job now is interpreting information.

So, my point is that with the changes in outreach programs (as it relates to natural resources) these issues are not going to go away. They are going to get more severe. Second, they are going to involve an enlightened public in ways that we've never seen before, so interaction between the university and the manager out there is going to be inadequate. And, third, simply supplying information is not going to be particularly helpful.

Now I would argue these latter two trends, particularly the abundance of information and the empowerment of everyone to be involved in the policy lesson, cries out for coalitions and partnerships in a special way. Not for political reasons. We've talked a lot about partnerships and coalitions as if that is the nice thing to do. But I think it goes well beyond that. I

Dan Godfrey

think society is simply begging for coalitions between academics and the practitioner, between the researcher and the land manager, and between all of them and the environmental community. If society begs out for those coalitions, why doesn't it just happen? If we're all talking about partnerships, why aren't we forming these day in and day out and why do we even have to mention it? Well, it seems to me that at the same time that we're crying out to explore new collaborative arrangements, we're embracing solidly-entrenched behavior patterns which offer resistance to these partnerships.

This is where I get in trouble with some of my academic colleagues, because it seems to me that the university has problems in responding to the changed character of natural resource outreach programs in these ways. First of all, there seems to be an attitude among the resource professions and the associated disciplines that they have a special insight into what's right with the land or with natural resources. On the one hand, I admire this confidence, but on the other hand I worry about how it fits with new collaborative approaches. Obviously not everyone can be in charge.

There's a second concern I have about some of my academic colleagues—there are times when they are unable to differentiate between what they know and what they want. In other words, they are trained to know what is, what has been, and what may be, but they may not be trained to know what is right, in terms of management of particular resources and the way they should be managed. So, how do they differentiate between what they know and becoming apologists for a particular view? And if we're going to be constructive collaborators, our partners are going to want to know when we are giving solid information and when we're being apologists for a particular view.

Myron Johnsrud

I don't have to dwell on the idea that increasing specialization in our colleges and universities has served us fantastically well in advancing the frontiers of knowledge but has perhaps led us to be poorer-suited to deal with policy issues. It's already been mentioned that the reward system in many disciplines does not seem to put a premium on either collaborative efforts or short-term, problem solving efforts. Most of my administrative colleagues would deny that in their academic institutions there is any prejudice against outreach in terms of the reward structures and the promotion structures, and while that may be true, I would also argue that academic disciplines have cultures of their own, and in our institution public service and outreach is not a big priority with our chemists.

The last problem that we have to deal with in getting involved in the policy area is that academics are trained in research and are motivated to find truth. Truth takes time and costs money. The policy maker, on the other hand, is motivated to make decisions in the short term with the information that is available, whether or not it's the truth. Now, if I'm correct that the major issues related to natural resources deal with policy, there had better be an understanding that the policy maker marches to a different drummer than does the academic.

So, are effective partnerships hopeless? Of course not. Everybody in this audience could talk about particular examples in their institution. But I would like to talk very briefly about an experiment that is occurring in the State University of New York (SUNY). The chancellor of SUNY, in attempting to add a distinguishing mark to the 64-campus system, has made addressing state needs the distinguishing mark for that system. In doing so, he identified four areas: environmental conservation; education; health care; and economic development. In each a plan has been developed to make the university a focal point for

collaboration between government and the private sector.

There is also an attempt to get the university involved in foresight analysis, trying to look ahead of the regulatory conflicts that the state seems to be involved in right now. And there is going to be an attempt to improve citizen awareness, citizen information, and citizen education, so, as they become part of this public policy process they can do it better informed. There is a possible role for the university because of its objectivity, a possible role for us to get involved in conflict resolution in ways that we have not in the past.

Now, it's too early to tell what the success of this is going to be. The State University of New York already has many people and many organizations that are involved in the environmental arena. We've got the College of Agriculture and Life Sciences in Cornell, an emerging Environmental Center at Cornell, the Atmospheric Science Center at Albany, the Hazardous Waste Center in Buffalo, the Marine Sciences Center at Stonybrook. All have a history of involvement. But the question remains, if it's difficult to get collaboration between colleagues on a campus, what is the possibility of getting collaboration among 64 independent campuses in a university system? Indeed, can a system work together? Can institutions other than the land-grant institutions take on a meaningful outreach role? Is there an ability to target audiences who support the activity as it relates to policy issues in getting the university involved?

I encourage you to watch this experiment. I hope to come back in five years and tell you it has been a successful one.

REMARKS BY

W. CRAIG MCCLELLAND

PRESIDENT AND CEO
UNION CAMP CORPORATION

I appreciate the opportunity to share some thoughts about how the practical, more mundane world of an industrial company is dependent upon the resources of the university. I am also going to take the opportunity to speak with you about another very critical involvement between business and the university: the quality and the preparation of the graduates that we need every year to operate our company, and the entire industry, in order to move into the 21st century.

My corporation is a paper company with forest product holdings. We have assets close to $5 billion, sales over $3 billion. We are ranked in the top 200 of the largest corporations in the country. Our resources include 150 facilities around the world, including four primary paper mills. We have 1.8 million acres of timberland; a research center staffed with 200 scientists (including 70 Ph.D.s); and the most important resource, our 21,000 employees. We manufacture and market packaging materials and

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systems, ranging from corrugated containers to high end packaging for cosmetics. We produce communication papers used in copies and fax machines, and flavors and fragrances that go into our foods, soaps, detergents, and other consumable items.

These products are all linked to the needs of society in terms of the standard of living. There is a strong correlation between the demand for paper products and a nation's standard of living or its development. Let me cite three ways our company has come to use, and depend on, the university, and the overall educational system, in doing our business and producing basic products for worldwide consumption.

Like many corporations, we have participated in several consortiums with universities. The focus for us has been on the basic raw material, namely the trees and recycled materials. The overall objective is to produce more product with less resources. At North Carolina State, for example, we are working in a biotechnology consortium aimed at growing taller, straighter trees. We obtain genetic tree material from our super trees and send that tissue to North Carolina State researchers. They perform the analysis, track the data, and return that tissue to our researchers who then place the genetic constructs into our plants. Only a very few meetings are conducted face-to-face every year. The arrangement is efficient and works off the strengths of both parties.

A different kind of consortium involves the Universities of Wisconsin and Minnesota, along with several other companies, and focuses on biopulping, which relies on the work in basic sciences of biochemists, genetic engineering, and fungus research. The aim is to get higher yields from the forest and recycled materials. The result of this joint work with several universities has been the encouraging sign that we're going to

Cecil Keene (left) and Fred Humphries

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harvest trees in 20 years instead of 30 years which has a significant impact in reducing energy consumption and improving environmental conditions.

We have also had the indirect benefit of your universities in the innovative bleaching process we use in producing white paper. Developed exclusively by our own R&D organization, it is a patented technology which has received worldwide attention because it eliminates the use of elemental chlorine in the bleaching of wood fibers. The result is a 50% reduction in the amount of water used per ton of paper produced. It totally removes the color of the effluent, and it eliminates all BOD and chlorinated organics in the effluent.

The people who developed this breakthrough were our scientists and technicians who graduated from your universities across the nation. This effort took ten years and $15 million. We did not use any joint research with universities during that time, but what made it all possible were the graduates turned out by your schools at the undergraduate, graduate, and technical levels.

The people on this project possessed exceptionally strong abilities in basic sciences, strong written and oral communication skills, and aptitudes for interacting effectively with their colleagues. This project was a very high priority for us, because it touched on the survival of one of our mills. And, consequently, the time frames and the complexity were severe. We had to maximize the focus on the objectives. We had to retain control over the information and its flow. But,

The people who developed this breakthrough—the effort took ten years and $15 million—were our scientists and technicians who graduated from your universities across the nation.

indirectly, your education system made all of this possible.

My third example illustrates how a billion dollar decision to build a world class manufacturing facility in Eastover, South Carolina, involved the university directly and indirectly. When you build a paper mill, you must deal with many critical resources. The real story of the Eastover mill is the people issue. Ten years ago we converted under-utilized farmland into what is now a 21st century manufacturing facility. This land now generates $30 million of payroll and $12 million in taxes for the state of South Carolina. We have $1.3 billion invested in this plant. It's staffed and operated by 843 salaried workers.

Our selection and our hiring procedures were unique. We made sure no prior paper experience was allowed for a new employee. We did not want any special experience. The number one criteria was that the person had the ability to learn and was committed to learning. The critical skills our people looked for in hiring were writing, math, and conceptual ability. We developed special pre-employment programs with the South Carolina special schools division designed to strengthen communication skills and quantitative techniques. The prospective hires took the course on their own time with no guarantee of employment. This approach enabled us to evaluate a person's learning ability and commitment to the work environment. Those 840 employees have redefined traditional learning curves. They have absorbed the intensive, ongoing training in probably what is the most advanced paper manufacturing facility in the world. They are salaried. They have no time clocks. They are promoted on merit. They can progress upward in responsibility at any time as long as they pass through the qualification reviews and testing. We believe this type of workforce is a model for the future and for the existing manufacturing employee groups.

Thus, from our perspective, the critical need is for the educa-

tional system in this country to produce more graduates who have the capacity and the commitment to learn. Let me offer the perspective on the teaching/research issue from one point of view. The basic mission of a typical company in the private sector contrasts with what probably is the basic mission of the university or any institution in the educational field. For most companies the basic mission is to build shareholder value over the long term, by providing goods and services wanted by society and that improve the standard of living. In carrying out that mission we are judged primarily by financial performance, sometimes in short time frames. Industry, thus, has a preoccupation with quantitative results, a relatively narrow focus on the issues, a bent toward action rather than analysis, a concern about competitive advantage. We know if we take our eye off the needs of the marketplace, our company will not survive.

I'm not going to be presumptuous enough to attempt to articulate what the mission is of the university. But I do suggest there are some fundamental differences in what drives the university compared to what drives a company. The university concerns itself with the human element and idea creation. It's the only institution we look to for shaping and strengthening the intellectual and learning capability of our people. It also concerns itself more with idea creation or research than do most industrial organizations. But, the university is driven by the human element and by ideas; the industrial company by products, services, that create value, something that can produce a return for an investor. The only way industry can produce value is to make effective use of the human resource that is turned out by the educational institutions. Right now, we have to devote more of our time and money to upgrade the people resources than we did years ago. At Union Camp, we spend over $25 million a year on training. That's over $1,000 a year per employee. And too much of it is aimed at strengthening the basic skills of writing and numbers.

Training in itself is something industry has great difficulty with. And when a portion of our training resource has to go to teaching basic

Thus, from our perspective, the critical need is for the educational system in this country to produce more graduates who have the capacity and the commitment to learn.

skills, we know we're not the best institution to perform that job. This is not only expensive, but it's time consuming and delays us in dealing with the solutions to our day-to-day problems and long-term needs.

We all have a big stake in this. The university plays a key role in calling attention to society's defects. Industry is most often the first with the solutions to those defects. Our ability to bring solutions depends more on the quality of our people than on any other factor. We are very pleased with the joint research programs provided by many universities. But today the most important contribution to be made by universities to industry is in preparing more people to handle the intensive training and changing conditions of the work force.

I'll close by asking you three questions. Is industry adequately communicating its needs to the university community? Do we send confusing signals by funding the research programs more aggressively than funding those schools that turn out the best prepared students? And how and where can industry help the university put more focus on the primary and the secondary school levels where the basics are supposed to be taught?

REMARKS BY

CHARLES MCDOWELL

I'm pleased to be here and I'm flattered to be here and I'm glad to be here. I've had a good day, I've rewritten my speech notes three times. The first two times, just trying to keep up with news announcements about Bill Clinton. And the third time to sort of back off and say "Why don't I just tell them some context for Bill Clinton and not try to follow him through another day?" It's just exhausting. Television is, has been, so effective for Bill Clinton. There have been two presidents for whom television was absolutely crucial' and they were Ronald Reagan and Bill Clinton.

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And there are no unlikely parallels there, it's just two people who fit into everything that Marshall McLuhan and others thought television could ever be for politics, although I try to remember that television is not always good for politicians.

I thought I would talk about the Clinton Administration for a minute, more in the sense of the context than in what happened yesterday and the day before. And I'm going to talk fairly seriously about some context for Clinton, and I'm going to start by going all the way back to the election. History will put down that Clinton got 43% of the vote, George Bush got 38%, and Perot got 19%. And history will put down that 43% is not even a majority and that a lot of Republicans made a big issue of the fact that, although Clinton won, he didn't even win by a majority. Which was to say, "He ain't even hardly President." On the other hand, the history books will say, if they choose, that George Bush with 38% of the vote was rejected by the largest margin for a sitting president since William Howard Taft in 1912. In case that makes anyone feel better or worse.

Perot, of course, was a symbol, and an important symbol, of a disillusionment with politicians in America by people.

Perot, of course, was a symbol, and an important symbol, of a disillusionment with politicians in America by people. And when 19% of the people voted for Perot, the other two didn't need to have a big contest about which one was the least unpopular. That's a massive turnout for a third party candidate.

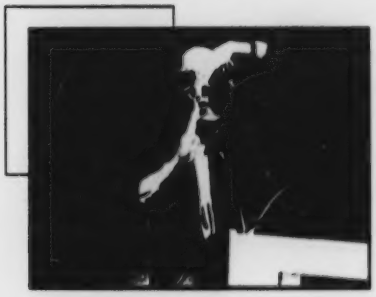
Nevertheless, Clinton got 44.9 million votes, which is the most votes any Democrat in the history of the United States ever got. We forget that in all the growth that's gone on in this country in the last 12 or 14 or 16 or 24 years, the Democrats have elected darned few people to anything presidential and have dominated other things.

As for Bush, 39.1 million votes

QUESTION

Are people having more success now differing with the media than they have in the past and, if so, why?

MCDOWELL



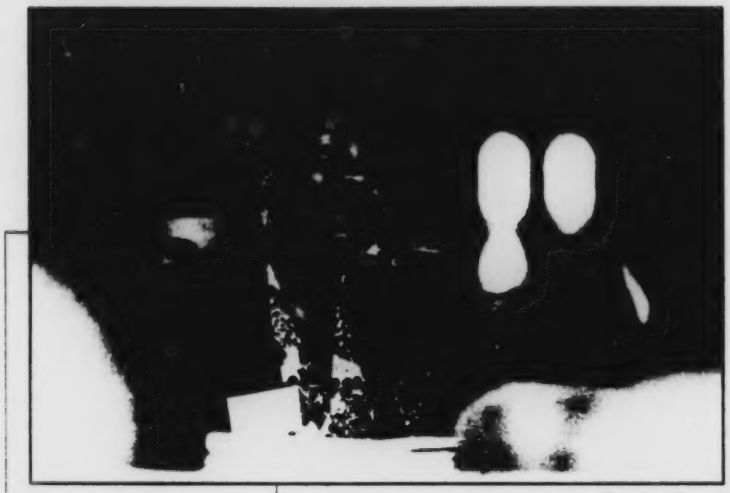
We in the media have always made great distinctions among ourselves. We have never thought you could trust a grocery store tabloid. That's one of our prejudices. We don't think television has ever really gone very deep into anything. It just tries to use the surface stuff that's interesting. We think most newspapers, though dull, are amazingly fair. I can testify that the credibility of the media generally has not been lower in my lifetime. So, when a politician is speaking for himself or herself, they have a new kind of power by not having to go through us and not having to hear our interpretation. We don't have the power to make or break anybody anymore.

is 10 million votes fewer than he got four years earlier. Now there is historical change. There is change that tells you something about what your country is thinking, where your country wants to go, how desperate your country is or whatever the conclusion. For one candidate to lose 10 million votes in four years is quite remarkable. I would add that Bush's total was 15 million fewer than Ronald Reagan gathered in 1984. And incidentally, Clinton won back half of the self-designated Democrats who had voted for Ronald Reagan.

And when you get half of a great movement coming back home or what had been home, that's an interesting thing too.

I think it's also interesting that turnout **increased** 6%. TURNOUT means qualified voters who aren't registered—of people qualified to vote, qualified age and residency and so forth. That had been declining in America since 1960. When Jack Kennedy was elected he got a 63% turnout—63% of the people who could have voted, voted. And McLuhan explained that in the television age more and more people would vote because more and more people would have politicians in their living rooms and would know them and would want to vote for them. But what's happened is that voter turnout has declined steadily since 63% in 1960, to 50%, really 49.8% in 1988. Total decline. Then this time, it rose 6% back to the level of 1968. A surge of young voters and a surge of women. Women voted for Clinton by about 10 points over Bush. Working women voted for Clinton by 20 points over Bush. Men voted for Bush by 4 points. (I'm leaving Perot out of these comparisons). The movement of women to Clinton out of fairly wealthy households, out of California counties that are famous for their conservatism, tells you something about the impact of the

Janet Usinger-Lesquereux



Eunice Bonsi

abortion issue in American politics. And it is the principle problem that a huge party now is stuck with and we shall see how it comes out.

I have one other statistic that interested me because of Bill Clinton's status with the draft and the Vietnam War. Vietnam veterans in exit polls voted 38% for Bush, 21% for Perot and 41% for Bill Clinton. So, he got the vote of the noble Vietnam Veterans.

This election marks something else. It marked the end of gridlock in government. The cliche of the ages will not go away. It will be there. Because we have lived in a very unnatural time, unlike any other time really in American history. The Republicans have dominated and run the White House for 12 consecutive years and had run it for 20 of the last 24 years and the four little years of Democrat Jimmy Carter didn't change much of anything. So we're talking about a White House that had been taken over for a generation by the Republican party. And at the same time, we are talking about a Congress in which the House of Representatives which Jefferson and Madison and Hamilton and all conceived as a place that would truly reflect the mood of the people, and re-elect them every two years, make a new judgment every two years, have the districts drawn very concisely.

The Democrats have controlled the House of Representatives for 40 years. There is not a Republican member of the House of Representatives who has ever been in the majority. Bob Michael admitted that he wouldn't know how to be the majority leader. This gridlock thing. The Democrats have mostly run the Senate for the same 40 years they have run the House. And yet, at the other end of the Avenue, Republicans relentlessly controlling the White House. Well, now the Democrats control the White House, for four years if nothing goes wrong, for four years anyway. The Democrats have an 80 vote margin in the House of Representatives and a 57 to 43 margin in the Senate.

I want to say something else about gridlock. People liked the idea of having Congress and the president to be of conflicting parties. People got disillusioned about politicians so they voted Democratic for the House of Representatives and the Senate because the Democrats are shrewd and keen and can get you stuff for the district. Those Democrats know how to get you a new contract and get you this and get you that. And Republicans in the White House can see that you don't have to pay for it. Now just think about it and you'll see that is roughly how we have operated for 24 years.

What was the election about? What was it really about? Well everyone knows the answer to that.

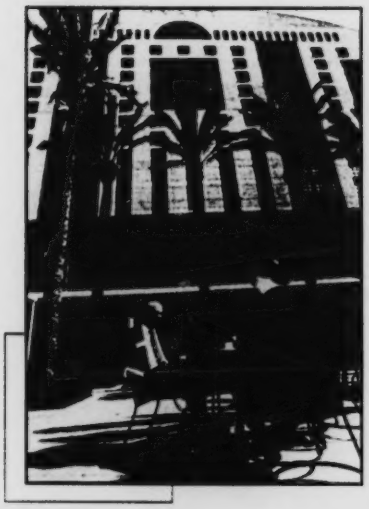
What was the election about? What was it really about? Well everyone knows the answer to that. "It's the economy, stupid," James Carville wrote. It was about the economy, but it was about the economy in terms that we don't print on the business page very well or handle very well in the stock tables or in quoting statistics like Perot and I do. It was a sense of the economy that got into people's lives and into their stomachs, into their

nervous stomachs.

The leading creditor nation in the world had become the leading debtor nation in 10 years time. That's a big thing to happen. That's an amazing event for us in this room to have lived through. The leading creditor nation in the world became the leading debtor nation. Median family income in America, the income of the median family adjusted for inflation, had not increased, and still hasn't, since the mid-1970s in America. There is nothing like that in our history anywhere—no gain in median family income since the 1970s. People feel that. The gap between the rich and poor in 12 years had widened and widened. The lowest fifth, at the end of the Bush administration, the poorest fifth of Americans, made 3.8% of the income. And the richest fifth of Americans made 46% of the income. We know it's different, but did we know it's that different?

So, people thought about their childrens' future and how would the kids get jobs and how in the world would the kids go to college? How would they go to college and pay? And how would they get medical care? And right in our time, these people getting ready to vote in an election, realized that their medical care was costing them 1/8 of the family income. They didn't figure that out, they just knew it was a lot. Turns out it's 1/8 of the family income and the food doesn't cost but one-tenth of the family budget.

So, people thought about their children's future and how would the kids get jobs and how in the world would the kids go to college?



So people were worried. And then people weren't all that pleased with Clinton or Bush as far as I can tell, or Perot. Some people were fairly enthusiastic but people got into a sort of mood of, let's do it different, let's change. Let's just change it one way or another. And then what they saw was the new generation and that was the Clintons and the Gores. And it was a new generation of people in their 40s and it was the first time that a lot of Americans thought I'm going to vote for someone younger than I am. It was an awesome experience.

And something else was going on here. Into this came a very fundamental change in American politics–MTV, Arsenio Hall, Larry King, talk shows. We got into real talk and Clinton turned out to be just terribly good at it, not only smart at it, but very capable of explaining difficult things and of stating ideals, and of giving himself the benefit of the doubt, and of being a little too anxious to please, and all the things that are good about him and all the things that hold him down a little bit.

Meanwhile, the Bush campaign was totally inept. It wasn't George Bush who was so inept. It was one of the worst political campaigns in history. And if you're an ardent Republican, you have a very good excuse that it was not a test of Republicanism because it was hopelessly inept.

Now, I want to go to the Clinton program. After charges of waffling and stumbling and trying too hard to please, Bill Clinton has now come forward with an economic plan, a tax plan that's gotten a remarkably sympathetic, even enthusiastic, reception from the American public. At the very same time, the lobbyists were sneaking around saying it's the worst thing in history. The Congress is quaking, saying we could never pass this mess. And the people are now learning something about taxes.

We are going to have a corporate tax increase but do you know how many corporations it affects? It affects one tenth of 1%

of the corporations in America. That's still a whole lot. And it's all the big ones we ever heard of, but it's not a tremendously heavy hit. The energy tax is the one in this first wave that will touch most of us and the energy tax is really

pay at all. Medicaid should be utterly free.

I have a thing called my "fairness" summary, and that is how this tax program is going to work is that about 30% of what we take in is going to be paid by

limits on Medicare and Medicaid and it's going to get dicey. We're going to add 35 million people to it, and Hilary Clinton apparently is working it out.

We're going to have sin taxes on cigarettes, probably a dollar a

William DeLauder (left) and Claiborne Smith

what Americans will pay. And it will amount to less than $30 a month, and I'm allowing for some mistakes in there. It's probably going to come closer to $30 by the end of the second year, and then it may go up some more. We're going to increase the taxes on social security benefits for people who make plenty of money, and we're going to have some Medicaid. I think poor people ought to pay less and less until the people who are terribly poor shouldn't

people with incomes under $100,000 a year, and 70% is going to paid by people with incomes over $100,000 a year. People under $25,000 aren't going to pay anything and people under $20,000 are going to get cash instead of paying.

So, I don't really think that it is anything horrible. No one pays as much as 1% more in total taxes to the Federal government until you get to $200,000 and up, and the effective tax rate is going to go from 21-24%. Then to come, we have got

pack or more. And so forth and so forth. Just remember this, until the turn of the century, just know that half of all the increases in spending that occur as we grow as a country, as we grow as a population, as we change our tax system, half of all our expenses will be Medicare and Medicaid. It's not as if they were just two little items. They are half of the whole damn thing. And we ought to learn that.

There will be spending cuts. There will be reductions in Medi-

care and Medicaid expenditures, how much the government is willing to pay. There will be military cuts. There will be cuts in federal pay—100,000 federal workers are going to lose their jobs as a symbol. That doesn't save one millionth of one percent, but it will look good. We are going to cut funding for the space stations and the supercolliders and we're going to look at the Agriculture Department—why with fewer farmers in America, do we have more people working at the agriculture department? We quadrupled employment there in the last 20 years, and we're down to almost no farmers, but we have got a big Agriculture Department. And that probably doesn't cost much, but it just don't look right. And it's going to get fixed.

And high tech is suddenly going to start getting help from the federal government and the aircraft industry—from Seattle south through California—is going to start getting *real* help from the government. And we're going to get into national service to help kids pay these incredible tuitions and so forth, and we're going to reduce the deficit by $325 billion in four years. If that means anything to anybody. Since the deficit runs at $300 billion plus a year, we're going to reduce one year's gain in a four-year period. Maybe by then we'll be ready to do more, and we'll be able to do more, but better yet, maybe the economy will be growing and we'll be thriving and we'll be getting rid of much more of that budget deficit once people get to understand what we're doing.

Meanwhile, in Washington, Congress is finding ways to fudge and back off, and they want to see spending cuts before we put this awful $30 a month tax on the American people. Spending cuts. And Clinton is exactly right, and I don't know who, probably Carville, told him to say it, say, "What spending cuts do you want Congressmen?" I'd love to make a list. No Congressperson will tell you a single one. Because they know the pressure that comes from home.

As we grow as a population, as we change our tax system, half of all our expenses will be Medicare and Medicaid. It's not as if they were just two little items. They are half of the whole damn thing.

The press. We're enhancing our reputation for being sort of picky. We are sort of picking at Clinton. And we're sort of righteous about "Well, he shouldn't have misrepresented what he was going to do back in the campaign." Good lord, Franklin Roosevelt didn't do anything he said he was going to do in the campaign. I don't think that's noble, but we've lived through it before. I think we're a little worried about being liberal, and we want to demonstrate that we can be critical of Clinton, so we're pretty critical of Clinton. But in the end I think it was put in perspective by Meg Greenfield, editor of the *Washington Post* writing in a column. And she said that after a decade of "dishonest dithering by both the White House and the Congress, we're now, in contrast, into a zone of reality."

You can pick at it, but reality is being discussed. Clinton is out in talk shows discussing the budget, and he's sitting down with bankers and economists and plain people and discussing it, and anybody else who wants to know what the program is going to be. Or how it sounds. And something is being worked on out in the open, and I feel proud of my country when I see it.

Herb Stein, Republican economist, conservative, was Nixon and Gerry Ford's principle advisor, says the following. He has reservations about this plan. Plenty of them. He'd change most of the details. But, he says this is the only plan we've got. If it fails, "The lesson will be that our system simply rejects even a cautious effort to exercise fiscal responsibility."

So, work now begins on a new,

economic plan and on a deficit that's quadrupled in 12 years. Think of the Federal budget as a big, round pie. The entitlement programs—Medicare, Medicaid, are the huge ones, and then there's military retirement, the veterans' administration payments; some farm subsidies. The entitlements are *half* of the whole thing. And you're entitled—you can't fool with it. Entitlements *must* be paid—21% is defense. Here's this half and here's 21%. You can take about 1% off that a year without wrecking jobs in Portsmouth, Virginia, and Norfolk, and here in this town and everywhere else. And everyone agrees that we're going to bring defense down from about 25% which it was four or five years ago, to maybe 15%. But 21% is what it is now. And if you'll add these large numbers together—50% of the budget is entitlements—and you add 21%, you've got 71% of your budget.

But then you've got to add something else. You've got to add 14% which is interest on the debt. You have to pay the interest on the debt. And so, if you have 50% entitlements and 21% defense, and 14% interest on the debt, you are at 85% of the total federal budget, and we ain't gotten to anything yet! There is only 15% left.

Now think of these as three fives. All that is left in the budget are three 5 percents. Five percent of it goes to the states from the federal treasury to match their programs. We do pass out about 5% of the total budget to states for honorable tasks that range from their libraries to medical stuff and all kinds of things. The next 5% is a very large amount considering it's only for one thing—5% is taken entirely by the S&L crisis. So, 5% is money for the states and 5% is for the S&Ls and it should be more, we just can't afford it. Which leaves 5% of my whole budget now, down here, for what? For Congress; for the Supreme Court; for the entire Supreme Court system; for the White House; for the entire executive establishment; the treasury; agriculture; commerce; education, etc. Name the rest of the departments—the CIA, the FBI, the United Nations, the National Institutes of Health–the World Bank. Foreign Aid less than 1% of the 5%. The space program, the drug program, the prisons we're building left and right, the entire cost of everything called discretionary spending is 5%!

Charles McDowell

So what can we cut down in there? To survive? Why don't we for the sake of the argument cut it all. Abolish the White House, the Supreme Court, the Congress. Fire everyone in the federal employ, get rid of the federal establishment. Would that balance the budget? NO. It would merely reduce the deficit to $200 billion a year. And we'd still have to deal with it.

So that's the serious word. I have become righteous as I finish.

REMARKS BY

CAROL CARTWRIGHT

PRESIDENT
KENT STATE UNIVERSITY

We want to focus on the application of outreach capabilities within universities and the leadership challenge of improving both current and future outreach of our nation's public universities. Let me begin by reminding us all about the national mood and the context within which we will structure change.

First, the economic context. According to recent reports in the *Chronicle of Higher Education*, state appropriations for higher education this year are less than they were two years ago—the first two-year drop in our country's history. Are these reductions merely a sign of the economic times or do they signal a much deeper discontent? Many believe that there is a deeper discontent and that the period we're entering is profoundly different from those that have gone before because of changing values and expectations. Public expectations are changing, and we are challenged to listen and respond.

We are at a watershed for higher education in the nation. It will not be business as usual for us when the economy turns around. We're at a point where we

can create temporary safety nets to bring us through this crisis or we can seize this opportunity to bring about meaningful and fundamental change.

I think your presence here suggests an interest in fundamental change. It will take many years of experimenting and refining to create fundamentally different models for higher education. And while we can't yet see the details of the new university, we can speculate about some of its characteristics based on the issues that we're going to need to be solving in the 1990s. For example, there will be more emphasis on internationalization, reform of intercollegiate athletics, greater accountability, diversity, expanding uses for technology, and, yes, containing budget tensions.

New university models are likely to:

- be willing to undergo public scrutiny as well as internal self-assessment.
- understand that we must earn the public's confidence and support by telling them about our values and our results.
- have people willing to listen to our critics as well as to each other.
- be interested in results and student development, as well as the development of ideas.
- value partnerships and work to create them.
- be willing to work to create an atmosphere of diversity that celebrates our differences as well as our commonalities.
- be committed to extending the results of many forms of scholarship to those who can benefit.
- be places where real problems get real time.
- place high value on problem solving.
- be ones in which every member of the university community participates enthusiastically in serving regardless of job title.
- value every member of the community and respect their contributions.

Truly, the whole that we can create together is better than what any of us can do separately. We must have dreams and visions for our universities, but we must also acknowledge that it will take uncommon pragmatism to reach our goals.

We must build more partnerships. At a time when our traditional resources are dwindling and the public's expectations of us are growing, partnerships and other cooperative ventures will enrich us and benefit our students, the communities we serve, and our faculties and staffs. All will reap the rewards of doing together what each could not provide alone. We benefit when we pool talent as well as dollars. The important partnerships are fairly obvious–between universities and business; with local, state, and federal government; with social agencies; with public schools. But let us also increase the partnerships with each other and within our institutions. The walls are coming down, but more walls can and should be

Mary Smith (left), Virginia Caples, and Hoover Carden

The master issue is not how hard faculty work, but what tasks faculty work on. And how clear we are about the signals about what kind of work is important for faculty... service is typically treated like the country cousin.

eliminated, especially between disciplines and between missions in the university.

You've also heard frequent references to the academic culture and its resistance to change. And about the rewards system, or more specifically about the tyranny of the research mission in the rewards system and the consequences for teaching and outreach when the research mission is considered to have the highest priority.

Russ Edgerton, American Association for Higher Education president, suggests three reasons for the reexamination of faculty roles: changing conditions, leadership, and the publication of the report *Scholarship Reconsidered.* Russ offered fourteen points in the document to identify essential aspects of our discussion about faculty roles and rewards and to document actions that have already changed the academic culture in many institutions.

He reminds us that the master issue is not how hard faculty work, but what tasks faculty work on. And how clear we are about the signals about what kind of work is important for faculty. His review of recent action and literature suggests that service is typically treated like the country cousin. The status and definitional issues of service are as muddled as ever. He references the good news, that the scholarly societies are picking up on the scholarship reconsidered formulation and developing field specific definitions of faculty roles. And partnerships between our institutions and the discipline societies are other essential ventures for us in the 1990s.

Edgerton notes that lots of attention is being focused on reviewing faculty in various ranks and on examining what expectations are appropriate at each review stage. Campuses seem to be moving toward continuous evaluation throughout the faculty career cycle and toward standards that acknowledge different stages in faculty careers. This suggests that we can "grow" people into outreach delivery and then reward them for it.

He also notes a perceived need for new evaluation criteria and methods that seem at this point to be limited to the domain of teaching. He also indicates that many campuses seem to be rethinking the criteria and methods for evaluating research, broader scholarship, professional service, and scholarly performance in all of its dimensions.

Finally, he references the commendable focus on reexamining the formal reward system. He notes that campuses may be neglecting opportunities to foster professional communities that can reinforce the intrinsic interest faculty have in teaching and in professional service. And he concludes with a special opportunity for us to change the culture. There is now talk of shifting the focus of evaluation and accountability from individual faculty to groups of faculty, especially academic departments. Campuses, he notes, seem to be sneaking up on this agenda rather than tackling it head on.

This session is directed both to the dream, to the vision of universities committed to service and outreach, and to the practical realities of implementing outreach. In the vision and the application, leadership is critical. Leadership is taking risks and making choices. It's an instinct for sensing the moment for action and the timing of decision. It's confronting issues and problems. It's also followership. Leaders cannot go where people are not ready to be taken. And while some of us have roles that obviously require leadership, we must find ways for everyone to participate if we will lead the development of new models of outreach and service in our institutions.

REMARKS BY

HUNTER RAWLINGS

PRESIDENT
UNIVERSITY OF IOWA

We are here to talk about what public universities do for the public. That seems an obvious, even undebatable, part of our mission. But just try bringing it up at a faculty meeting. To a scholar immersed in research and teaching, any reminder of public responsibility may appear intrusive and an encroachment on academic freedom. But in the coffee shops and legislative corridors of our states, and in the power centers of Washington, the perception of public universities is very different. We are seen as remote, self-

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Jerry Apps

centered and indifferent to the needs of the public. Habits of insularity and arrogance at both the individual and institutional levels have led to betrayals of public trust. These revelations happen to coincide with the end of the Cold War, changing the climate of support for research that has helped to make American universities the best in the world.

So, it is hardly surprising that the new administration's call for shared sacrifice extends to universities. In the new budget plan, we're being asked to accept over the next few years a reduction of $1.3 billion of reimbursements of our indirect costs for research and, for universities like the University of Iowa, with teaching hospitals, another reduction in cost recovery for medical education. We cannot expect much public sympathy for our plight. Our critics like Bill Bennett have touched a nerve and won media attention because they are at least partially correct in their analysis of higher education. Both collectively and individually, we have indeed moved away from our commitment to public service. We have lost something of our moral edge. Academic careerism and neglect of undergraduate teaching endemic in universities today derive from self-interest and disregard for our public constituents. At public universities across the country there has been a seismic shift in our traditional center of gravity, straining our deeply rooted historic commitment to public service.

Public universities are a quintessentially American invention dating from the Northwest Ordinance of 1785 and from the beginning they were conceived as instruments of the public good. Thomas Jefferson's statement of purpose for the University of Virginia, drafted in 1818, provides the earliest and

Academic careerism and neglect of undergraduate teaching endemic in universities today derive from self-interest and disregard for our public consituents. At public universities across the country there has been a seismic shift in our traditional center of gravity, straining our deeply rooted historic commitment to public service.

most eloquent summation of the public university's reason for being— "To form the statesmen, legislators, and judges on whom public prosperity and individual happiness are so much to depend." It would be difficult today to improve on Jefferson's enunciation of our public purpose.

Throughout the report of the Virginia commissioners who established the University of Virginia, public welfare and private virtue are recognized as the twin objects of public higher education. If we are to reform our universities from within and win back our external constituencies, we must return to these first principles.

Now let's not pretend that it will be a simple matter to recover our heritage. Our reputations among our peers are based on our achievements in research. But in the public mind, what counts the most is our teaching and service. After decades of institutional pressure for more and better research, it is difficult to restore the dignity and prestige of teaching. And to restore public service to a position of respect would appear almost impossible. We are no longer bound together in what Jefferson called the academical village. The public university of the late 20th century has become a sprawling megalopolis in which thousands of individuals relentlessly pursue their own separate research and career agendas.

The same is true of the great private universities, to the point where Harvard Dean Henry Rosovsky felt it necessary to state in his 1990-91 annual report: *"... tenured members of the faculty frequently as individuals make their own rules, while for the more important obligations of faculty citizenship neither rule nor custom is any longer compelling. There is no strong consensus concerning duties and standards of behavior. And the situation has been made infinitely worse by the lack of information in the hands of deans concerning individual professors."* That's a very remarkable statement for a long-term dean to make. In such an environment, which is as pervasive at public universities as it is at Harvard, a summons to the Jeffersonian ideal of public service may seem anachronistic, almost quaint. But I am heartened and emboldened to call for such an effort by signs that a cultural transformation may be beginning to take place in the country as a whole. I believe that as a society, we have seen the folly of the last ten years and we may be ready to acknowledge our civic obligations.

Bill Moore

In the arresting Monticello declaration of President Clinton, there is nothing wrong with America that cannot be cured with what is right with America.

This thesis applies all the more strongly to our own institutions. There is nothing wrong with public universities that cannot be cured by what is right with our public universities. We are immensely strong. We don't need to stop doing our research and start doing something else. We just need to direct more of our expertise toward publicly oriented purposes. Those of us that are not land-grant institutions need to develop our own 20th century applications of Morrill Act principles. We need to infuse an ethic of service into everything we undertake and to remember that teaching, research and service are all avenues for extending our resources to others.

How can non-land-grant universities improve their services to the people of their states? Let me give you a few examples from the University of Iowa. Our best known service to the state of Iowa is the contribution our health science colleges and hospitals make to the health of Iowans. Our hospitals and clinics comprise the state's only tertiary care facility in all major specialties and sub-specialties and we are proud of our service, education and research in these specialties. But Iowa is a small rural state, and many of the specialists we train choose to practice in metropolitan areas. If we are to meet the real, long-term needs of Iowans, the university must prepare more primary care physicians to practice in small towns and rural communities. We already have a statewide family practice preceptorship program, but we must do more to attract students into the program as well as helping Iowa's communities attract and retain the physicians they need. This is not an easy business. It goes against demographics, against the status system in medicine, against the career inclinations of most young physicians. But we have used some imagination and cooperated with community leaders around the state to develop a new primary care initiative in Iowa.

We also serve the state through our humanities programs which are not often thought of as service and outreach efforts but that's exactly what they are. For example, our Japanese faculty and our center for Asian and Pacific studies formed a partnership with Iowa's foreign language commission and its department of education to help ten high schools launch new programs in Japanese. None of this was in anybody's job description. We ignored the bureaucratic lines and turf boundaries and made sure that it happened by raising funds, recruiting teachers from Japan personally, and organizing coalitions among small school districts to make it possible for them to share a teacher. Now we have programs in Japanese; not just in towns that you might have heard of like Sioux City, Council Bluffs and Fort Dodge, but in smaller districts that you certainly have not heard of like Clarinda and Muskateen. And when students in these programs graduate they will come to the university prepared in Japanese.

I look upon our creative and performing arts programs as still another form of public service. The driveway around our performing arts center is often filled with school busses from around the state while children attend special performances. Our art museum has initiated a program to attract third graders to our exhibitions. Our faculty artists, musicians, dancers and writers conduct performances and master classes in communities that have little access to the arts. One of the writers in our writers workshop, W.P. Kinsella, who wrote the novel that became the movie "Field of Dreams," has started a whole tourist industry in Dyersville, Iowa. Now that's economic development. And if you don't believe it you just ought to go to Dyersville, this summer some time, any day, and you will see people from all over the United

William Schreyer

States pulling off Route 80 to see the "Field of Dreams." And it's pretty remarkable to find a tiny town like that economically sparked in the way it has been.

The paradigm of the public research university appears to be due for a major shift. For 100 years we have gone with the German model with a heavy emphasis on research and scholarship heightened by public funding of our research efforts since World War II. Federal funding has driven a large part of our research agenda, an agenda made under Cold War pressures rather than in response to local needs or domestic social concerns. Now the world has changed. Our nation has changed. Universities need to offer a different set of public services for a different time and we must prepare for a more integrated mission. If we don't change the paradigm for public universities ourselves, it will be changed for us.

With a fresh, national start, let's devote ourselves again to those Jeffersonian purposes for which we were founded. This will be as good for us as it is for society, and it will help restore our moral edge. If we spend less time fretting about ourselves, our funding, perks, and privileges, and more time thinking creatively about what we can do for a nation that needs us and our expertise, we will accomplish more of lasting value and our public image will take care of itself.

REMARKS BY

EDWARD FORT

CHANCELLOR
NORTH CAROLINA
A&T STATE UNIVERSITY

Before I focus on the barriers to outreach as far as the 1890 institutions are concerned, let me reference John Naisbitt's book, *Megatrends in the 21st Century.* Naisbitt and his co-author articulate the setting for the year 2000 and beyond by suggesting that it would be characterized by a booming global economy; a renaissance of the arts; the emergence of free-market socialism, global lifestyles and cultural nationalism; the privatization of the welfare system;

Norm Brown (left), Don Trotter, and C. Peter Magrath

the rise of the Pacific Rim; the appearance of the decade of women in leadership; the age of biology and all that portends; and the religious revival of the new millennium.

This is a capstone to the triumph of the individual. It is within that setting that we ourselves regard the whole question of outreach as far as the 1890 and 1862 institutions are concerned as a group. As we look at this, I think it's important for us to identify the barriers or challenges to the outreach mission.

First, let's look at the history of our formation. These institutions were granted land-grant status in 1890, 28 years following the 1862 Morrill Act. The Smith Lever Act, created to fund the 1862 institutions for Extension, was enacted in 1914. Yet, history tells us it took about 60 years for those black campuses that were institutionalized in the 1890s to receive the initial dollars for agricultural extension. Dr. Joyce Payne, the director for the Office of Public Black Colleges and Universities, suggests that "we have a lot of catching up to do given this historical neglect. We need a national initiative to strengthen Extension programs and position them appropriately to address increasingly critical social and economic needs in communities that we traditionally serve."

Second, we must galvanize delivery systems and strategies designed to effectively deal with the economic problems associated with the uniquenesses of the communities which 1890 extension programs serve nationally. Dr. Payne argues that the following are directly associated with the extraordinary problems that permeate those areas where 1890 institutions provide their outreach missions and their services to their communities, not all of which are in the South.

These problems include the fact that:

- Ten of the states that consistently dominate the bottom of the medium income scale for families with children are states served by the same seventeen 1890 land-grant institutions. In 1990-91, statistics from the federal government suggest that the median income for families with children in the state of Connecticut was nearly twice that of similar families in Mississippi, Arkansas, Alabama, and North Carolina, four of the states served rather heavily by 1890 institutions.
- Poor families in many of the areas 1890s serve have lost more than 13% of their median income. The same families reported high rates of infant mortality, low birth rates and an unusually high rate of teenage pregnancy.
- In 1990, 43% of all black children were living in poverty and nearly half are growing up in single-parent families. According to government statistics, hunger afflicts one of every eight children under the age of 12. And 5.5 million kids are hungry every day. Six million are "at risk." As a matter of fact, the hunger rate in the nation's capital is about 17.1% which is the fifth highest rate in the nation. Given the substantial amount of extension service which these 1890 land-grant institutions exert, it becomes critical to remove these barriers.
- The land-grant university's research posture is no longer one which focuses the majority of its resources exclusively on agricultural production. Agricultural research has shifted its emphasis for both rural and urban audiences to common concerns such as food safety and environmental controls, and issues that impact directly upon consumers. Increasingly, the land-grant university has recognized the fact that schools and colleges of agriculture are no longer the overwhelming, singular source of major resources by major commercial food producers. In fact, this research is carried out often by international corporations, many of which are based overseas and control millions of research dollars.

It's interesting to note that a non-revitalized outreach mission is a barrier to extended outreach, not only for 1890 institutions but also for our 1862 colleagues. We recognize that a large number of small and family farmers continue to exist in this nation. These farmers are increasingly seeking unbiased and objective land-grant expertise. Thus, the barriers associated with this aspect of mission revitalization must be removed to insure that there is an open track between the 1890 and the 1862, institutions so that these small, low income farmers who need assistance from the universities can get it.

This barrier to increased proficiency for land-grant institutions, whether 1890 or 1862 is one that has received substantial attention over the last several years. For example, the president emeritus for the University of *North Carolina System, William Friday, suggested that "we must keep our root system in the people. The land grand institutions should take a much more active outreach in the state's public education system, and at the same time serve as an engine of economic growth."* At North Carolina A&T State University, our dean of the School of Agriculture, Dr. Burleigh C. Webb, envisions the world and urban land-grant thrusts as coming together in such challenges as "forest land

We need a national initiative to strengthen Extension programs and position them appropriately to address increasingly critical social and economic needs in communities that we (public Black Colleges and Universities) traditionally serve.

Edward Fort and Carol Cartwright

research and acid rain research, and issues of the urban dweller, food production, product safety, minority entrepreneurship, global marketing, and international trade. "Unless there is a revitalization of our mission so as to inculcate the very issues that were defined by Dean Webb, we are moving in the wrong direction.

Dr. C. Eugene Allen of the University of Minnesota echoed the same sentiments by suggesting that "our graduates should not only receive a sound liberal education, but they should also graduate with some understanding of the complexities of societal issues, such as health care, food, and agriculture, hunger, environment, science policy, and global issues such as competitiveness."

In effect, these nationally–recognized experts are suggesting to us that for the revitalization of the land-grant mission, particularly as it pertains to the outreach function is an absolute mandate. The absence of that revitalization is a clear and present barrier to the progress of 1890 institutions, as they continue to serve the poor, the disenfranchised, the rurally–isolated farmer, the low-income urban dweller, and 4-H groups that are attempting to prepare themselves for the future.

The next barrier with regard to the 1890s pertains to the issue of the paucity of state support. Now, I have to get into this rather gingerly because I know it's one area that is fraught with political, bureaucratic, and organizational dangers. But, it appears that of the $60 million allocated to the states annually through the U.S.D.A.'s Expanded Food and Nutrition Education Program, not one 1890 institution receives direct support. The research goes on to suggest that U.S.D.A. cites the Smith Lever Act as the legal basis for denying access to funds such as that on the part of 1890s, despite the existence of Title VI.

Finally, the Payne research suggests that 16 southern states with 1890s are allocated $27 million annually constituting about 50% of the total dollars obligated through U.S.D.A.'s Expanded Food and Nutrition Education Programs. The problem, of course, is the fact that the focus with regard to those dollars is not on 1890s but 1862s.

The challenge associated with the redirection of strategies for teaching, research, and outreach as far as land-grant institutions are concerned is one which much be thoroughly examined. Increasingly, federal and state resources, equalized to the extent possible, must be made available for the operationalizing of increasingly visible recruitment programs built on the offerings of agricultural science, biotechnology, international marketing, food science, and agricultural engineering. The barrier of the *status quo* simply will not wash as pertains to the land-

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grant movement. And that's the reason why 1862s, as well as the 1890s, have begun to redirect academic curricula to prepare students for high tech careers and to interface with research, business, and government.

Next, we've got to find a way to avoid the gridlock in the nation's transition from muscle power to mind power. Historically, our nation has moved from craft and manual work in the 1800s to mechanization as a part of the industrial revolution through the 1900s to automation in the post industrial revolution of the 1960s (inclusive of robotics and cadcam and sensors and machine vision), to the information age of the 1980s and 1990s (inclusive of group technology and integrated networking).

strong manufacturing base to a substantial decline in that same manufacturing base in the 1970s wherein "Made in America" no longer gave us a competitive edge. Then, as you recall, negative growth (because of productivity declines) ensued in the 1980s and 1990s, exacerbated by the trade deficit and a decline in the value of the American dollar.

Those economic realities were further exacerbated by the size of the national debt. For example, in 1977 the U.S. debt was about $706 billion. In 1981 under Mr. Reagan it was $994 billion. In 1989 Bush inherited a $2.9 trillion debt. And President Clinton is now dealing with a debt at $4.4 trillion and a $400 billion deficit.

Linzie Muldow welcomes a colleague

According to data supplied by the Bureau of Labor Statistics, our nation in the 1960s and 1970s showed a clear slide from a

Now these economic realities are compounded by the fact that in 1955, 85% of technological innovation was based in this country (according to the *U.S. News and World Report*). But by the year 1985, only 25% of technological innovation was controlled by the United States. Additionally, statistics produced by the Department of Labor suggest that functional technical illiteracy costs our nation between $25 and $30 billion a year.

Therefore, the real outreach challenge to 1890 and 1862 institutions is insuring that our curriculum reflects the cybernetics of the year 2000 and beyond. And there is no doubt that by 1995, 7.7 million jobs will be created in the arena of high technology, with engineers showing a growth rate of 30% and scientists a growth rate of 28% and general technologists 49%. If those statistics are valid, then the question becomes one of what do we do as a means of insuring that our mission revitalization ethos is one that reflects, curricular-wise, those nuances as directly associated with the strategies and delivery systems geared to insure that our outreach programs are meaningful.

In conclusion, I perceive that the 1890 and the 1862 outreach function is an inseparable part of this nation's history and certainly a part of our forward progress. And so, we've got to find a way to link our campuses to the conditions of economic life in this nation and these states. It's apparent to those of us in the 1890 and 1862 communities that a major, long-term federal and state investment is vital for the continued progress of extension outreach promulgation nationally. And that means, therefore, that we've got to find a way to

Active listening was practiced by Forum participants

insure that this becomes a major priority as far as federal and state governments are concerned.

Certainly, the steps initiated by the U.S.D.A. during the past two years represent movement in the areas I just mentioned. For example, capacity-building grants, geared to effect change in the understructure of 1890 institutions, has become a byword with the United States Department of Agriculture to the tune of about $10.2 million. Additionally, centers of excellence, a focus of the outgoing agriculture secretary could very well again become a major push.

For the first time in history, the U.S.D.A. invoked the 1890 national scholars program to recruit more young people into agricultural education as a career, with a range in funding traversing a four-year period running from $1.5 million to $2.2 million at the high threshold level. This scholarship money is going to make a huge impact on the continuation of recruitment efforts for the 1890 institutions.

I suggest to you, therefore, that our campuses are historically and philosophically committed to addressing the problems of society, particularly as pertain to our outreach function. And, therefore linking 1890s to the conditions of economic life in this nation represent more than just simply a moral issue. It is an issue of vision, a rational economic policy, and enlightened self interest. Thus, we must not fail to come to grips with these issues because if we do, then, future generations will remain locked in that vicious cycle of poverty magnified by the absence of sustained national investment in historically black land-grant universities and colleges.

We, therefore, must concentrate our efforts in a positive way upon dealing aggressively with the challenges which would slow down the successes which have been gained by 1890 land-grant institutions in outreach. We should continue to aggressively work with small income, rurally-isolated farmers; we shall, concurrently, expand our outreach endeavors as associated with the needs of those that are urban impacting.

And as we do so, we've got to do everything we can to revitalize the land-grant mission as we move aggressively into biotechnology, agriculture, economic models, and international marketing.

In conclusion, there is much to be done. We're convinced that there is a relationship between the adequacy of a nation's confrontation with these challenges and the continued forward progress of not just simply the 1890 institutions, but our counterparts in the 1862s. I'm convinced that together we can make a difference in the future of our children in urban and rural areas as they relate to the interface between the outreach work that our people on all our campuses do.

REMARKS BY

PATRICK BORICH

DEAN AND DIRECTOR
MINNESOTA EXTENSION SERVICE

Before I start my comments I would like to express my sincere appreciation to three different groups. First, the Kellogg Foundation for funding this Forum. I realize that this is a watershed event, and the fact that the Kellogg Foundation would put money into the National Extension Leadership Development program, I think, is an indication of their concern for the land-grant system and for outreach as an important part of it. I know that Norm Brown and Dan Moore are

here, and I also know that this is an extremely important goal for them personally.

Second, I'd like to thank the University of Wisconsin-Extension and particularly Chancellor Pat Boyle. I don't usually say serious things about Pat Boyle, but I will in this instance because I think few in this room know that, although the Kellogg Foundation provided a great deal of money for the NELD program, it was also subsidized very adequately by the University of Wisconsin-Extension in their effort to make this program work. So, I want to express my appreciation to Chancellor Boyle and to Wisconsin. And for somebody from Minnesota to say anything good about Wisconsin . . . I think you know it strains me considerably.

Third, I'd like to thank all of you personally for spending the time to participate in this event.

My presentation is not neatly typed like my predecessor's. It's been rewritten six times while I've been here. Because much of what I wanted to say has already been said. But I'd like to pull some of it together from a perspective of a Cooperative Extension Director and Dean in a land-grant institution. I want to title my talk: **It's time to stop the car.** And the reason I wanted to is because of a personal experience.

I have four children. My wife and I took trips with these four children in the back of the car, and, as you can guess, since they were within six years of each other, these were definitely some very long, arduous trips. With a lot of noise, a lot of bickering, and a father who wanted to get there as quickly as possible and a mother who wanted to get there sooner than that.

One of these trips was particularly bad, and I finally pulled the car over to the side of the road, turned around and in one fell swoop, knuckled each of the four on top of the head and said "we will not move this car until we have order." It is known in our family as "the time Dad stopped the car."

I would like to suggest that this conference is the time we stop the car. I want to do two things. I want to give you a little test — because all of you are academicians — on the relevance of outreach to your land-grant institution, and then I want to offer some suggestions from my point of view about what you might do to improve your ability to score highly on the test.

I have 35 years in Cooperative Extension. I almost titled that 35 years of marginality, because I believe outreach in most of our institutions has been marginal. In fact, during my Ph.D. in Adult Education my advisor said "You gotta get used to being marginal. Academic institutions don't consider outreach that important."

Well, here's my test. By the way, I hope people, including my bosses from the University of Minnesota, take this in the manner in which it is intended, and that is a kind of gentle jibe and not a severe test, because our institution wouldn't pass with high colors either.

1. Does your Board of Regents hold your university administration accountable for an articulated mission, vision and strategic plan for outreach?
2. Is there anyone in central administration with outreach as a sole responsibility?
3. Is outreach an integral part of your academic priorities or do your outreach faculty have a different personnel system, different titles, and a different promotion and tenure if there is such a thing?
4. Is outreach in your institution differentiated from faculty consulting, disciplinary or university service, or personal community involvement?
5. Do regular community needs of people (as Harlan Cleveland, another Minnesotan

Let's really become a people's university– access to education based on the best knowledge known to the human race in a form that can apply to a majority of our citizens.

says) have any input into your university research or teaching priorities?

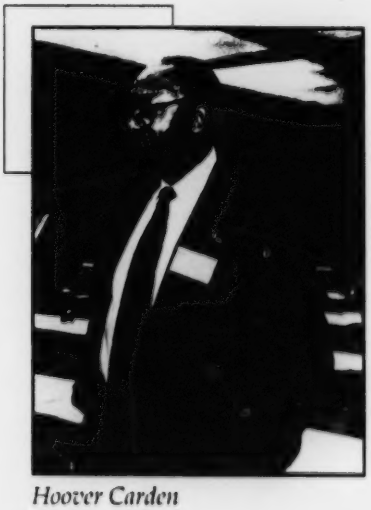
6. Do your faculty who get their Ph.Ds and graduate degrees, or do the faculty who are employed in your institution, have any knowledge or skill in outreach? As your graduates go through these programs, are they even acquainted with the concept of outreach as a university mission?

7. Does your reward system clearly articulate and value outreach, outreach that focuses on issues that are important to society?

8. Can the residents of your state describe your university beyond its degrees and research? Beyond its hallowed buildings like ours on the clean end of the Mississippi River? Beyond the fact that it's requiring additional funding for new buildings in bonding in the recent legislative session?

I would argue that looking at those criteria might provide you an insight into the marginality of outreach. My suggestion is its time we stop the car at this conference. We must be marginal no longer. Here are some ideas from a lowly dean for you to consider.

- I'd like to suggest we re-invent outreach and implement the land-grant concept, finally. We know that the University of Minnesota and Michigan State University have outreach councils. I know our Vice President Allen is chairing that council at Minnesota. We have defined outreach right now. We have created a vision for outreach. We are looking at some strategies at the institution LONG OVERDUE! And I know that this is happening at Michigan State, too. I'm not sure it's happening at a lot of land-grant institutions across this nation. As we reinvent it, is it on the agenda of the regents or trustees? Or do they hear about it second hand?
- Second suggestion. I'd like us to realize the changes that have occured, the issues that we are trying to reach through interdisciplinary programs with less resources, while maintaining our programs to our traditional audiences. I would argue we are positioned right now in Cooperative Extension in most of our land-grant institution to become a real outreach arm of a total university. It needs to be held up, it needs to be shored up. It cannot be relegated as a marginal entity any longer. It is YOUR community-based, locally funded (partially) potential first door to the university in every governmental entity across your state. And if it isn't working right with all that leverage, then you as administrators, presidents, regents, vice presidents, deans and directors need to make it work.
- Third point. We've got to work at eliminating the barriers — departmental barriers, collegiate lines, disciplines — that are interfering in our ability to provide an interdisciplinary kind of outreach. We've mentioned reward systems. I'm just telling you as far as I can see all the problems of the future in society will be multi-disciplinary. And not only do we have to break down the barriers, and I know this is a long hard road in any academic institution, but we have to also provide flexible dollars to help those barriers go down. There has to be some honey in the pot. And particularly in an academic environment.
- Fourth point. People, not their leaders, will do the leading. Ross Whaley said that, quoting Harlan Cleveland. All I would suggest is how does your university listen? That two-way bridge that Dan Moore mentioned yesterday. Here we have a Cooperative Extension System. Here we have a number of outreach arms. And I'm wondering how that information gets to the relevant actors at your institution. I think our Ivory Tower reputation is probably well deserved in most institutions.
- Fifth point. Structure. I would tell you right now that structure is not where we ought to



Hoover Carden

start when we talk about outreach. We generally argue about it. Whether it ought to be in the college of ag, whether it ought to be separate, whether it ought to be in the president's office. That's not the important issue. The important issue is what is its mission and vision and faculty understanding, and what is the function of outreach in your institution. And then start to worry about how and where it's structured. And I think we really need to look at structure, but way down the road.

- Finally, my last point is that we must walk the talk. As that famous philosopher Roberto Duran said, "No mas." No more land-grant talks, with glib land-grant analysis in action and a marginal outreach. Presidents, regents, vice presidents, deans, directors– all must demonstrate the meaning of what serving the people of our state means through their action, must show in what we say, what we do and how we act. Our president, Nils Hasselmo, talked to a group of alumni in San Diego and made some comments about the importance of outreach to that institution, and one of the foundation officers followed me down the hall and said to me: "He says that all the time — even when you're not around." I'm proud of that. That's walking the talk.

Let's not get back in the same car we stopped at the beginning of this conference. Let's build a new one, one where outreach is identified as important as it was meant to be in 1862, in 1890, in 1914, and in 1993.

Let's really become a people's university–access to education based on the best knowledge known to the human race, in a form that can apply to a majority of our citizens. I'll say that again. **A people's university — access to education based on the best knowledge known to the human race in a form that can apply to a majority of our citizens.**

I believe that kind of a car will once again regain the value and the prestige of a land-grant university. ☐

REMARKS BY

NORMAN BROWN

PRESIDENT
W.K. KELLOGG FOUNDATION

It's a critical time in the future of higher education in this nation. An opportunity, if not taken, that will have implications for generations to come, an opportunity that many of us have been looking for in this country. I want to congratulate you for being concerned about the future, and for your leadership and that of your universities.

Too often we're so involved in the day-to-day challenges and crises that we aren't planning for the

future, and it's encouraging to us at the Kellogg Foundation that we have the privilege of partnering with many of you in this room in helping prepare for the future and the role of outreach in our universities. I need to also take advantage of this opportunity to give my personal thanks as a product of the land-grant university system, as one who has benefited greatly, to a system that makes it possible for young people and for familes to be served by their great institutions in this democracy.

The W.K. Kellogg Foundation is investing in leadership development for outreach programs because we care about the future of this country. In one sense we care about universities, but in a greater sense, what is important is that we serve the people of this country and this world in a way that we're capable of serving. Our universities have a tremendous resource, a tremendous opportunity, but there are many people in this country who feel that (you're) not serving the people. There is no question that in this country the respect we'd like to see for higher education has slipped; many of the people who are paying the bill for our higher education system feel that universities are clubs designed to serve the people inside those clubs.

Unfortunately, there are a lot of people in this country who don't know what goes on inside the university. Too many of them have lost respect for what you're doing. We've got to change that. We think your investment in leadership and your attention to the future is going to pay dividends and is critical for the future of this country. We're convinced that this lack of respect and understanding is because our great public institutions have looked inward for too long. People aren't able to see universities doing things that are relevant to their needs.

The W. K. Kellogg Foundation is investing in leadership development for outreach programs because we care about the future of this country . . . Our universities have a tremedous resource, a tremendous opportunity, but there are many people in this country who feel that (you're) not serving the people.

I could talk about the virtues and the accomplishments, but I want to talk about some things we're seeing that perhaps could be instructive.

As we interact out in the field, more and more we're insisting that our interactions be with participants in programs—clientele, or clients, if you choose—taxpayers, citizens, along with faculty. In too many cases, we're seeing faculty who, quite frankly, are having extreme difficulty communicating with local people. Being from agriculture I probably should pick an agricultural example, but I'm going to pick one that comes to mind first and it's in the health area.

At Kellogg we are making multi-million dollar investments in trying to see that this country is focusing as much on helping a sick child get better and to prevent sickness at the community level and at the family level, than it is investing in complicated heart surgery and so on. We're focusing on primary health care. And we're finding that in many of the grants that we're making that we're starting to make the grants *to* the community, having them buy services from the universities. Why? Because we're seeing universities being more concerned about what's going on internally in their own financial problems than they are about those sick kids. Now, that's pretty harsh medicine, but I am saying that to you as a friend.

I am convinced that university faculty need help in learning, or relearning, how to communicate. Most of us came from those communities I mentioned, but in

too many cases, we're talking inside those hallowed walls. The hardest part is to get us to realize that we've got a problem. The hardest part is to tell university, Ph.D.-trained people that they aren't communicating.

Let me give you an example. In the last year I have attended three advisory committees associated with land-grant universities. We called them advisory committees but the people who were told they were advisors were talked *at* for about 80% of the time. I'm not sure we really wanted their advice. We need some training in listening if we're going to regain the respect that higher education in this country deserves and this country needs for higher education to have.

An area where we also need help is in the whole broad area of public policy. The Kellogg Foundation can do nothing without partners. We need you and others like you, and we find in many cases that all of us need help in doing a better job of informing public policy and of helping decision makers in this country make wise decisions. There are a lot of us who think we know how to do that, but I suggest we all need some help in doing a better job in that area.

One of the words that's been used a lot here is partnership. The business of forming partnerships is extremely difficult. We've been watching for example the health profession's education grant program where university people are attempting to form partnerships with communities. The University of Hawaii is one that understands community partnerships, at least in the health area. And we're seeing some exciting things happen because we're convinced that the faculty in the health professions there respect local people and are listening to mothers when they talk about their sick kids. And they are listening to nurses - the medical doctors are - which incidentally doesn't happen in some medical schools. We're encouraged by what we see there and in some

Bill Moore raises an issue

other institutions but more needs to happen in terms of forming partnerships.

We need to learn more about how to partner. How do universities effectively partner, given their governance structures, their history, and their traditions? Without giving up academic freedom? We need to work at that more. The Kellogg Foundation is willing to help because we're convinced our universities are essential. We can't get the job done in this country by just working through non-profit organizations and working with small, grass roots organizations.

The Kellogg Foundation for many years has focused on leadership and leadership development. We have made considerable investments in the land-grant and state university systems in the area of leadership development. And we have been delighted in many cases with the results. We trust that as you move forward you will find ways to allocate resources to the development of human capital, to leadership, and to the leaders that are going to take your place.

I want to talk a little bit about diversity because as we talk about meeting the needs of this country, one of our concerns at the Kellogg Foundation is we're not as representative as we ought to be of this society. And we've been talking about it for a long time. We need to work harder at that, and we need to quit talking and we need to do it. And of all the institutions that ought to be able to deal with that, I think universities and foundations ought to be the leaders because we're in a position to grow the new supply of leaders. If we purport to serve the people of this country, we can't have a white male club do that. We have got to work harder at the whole issue of diversity. When people come into meetings with faculty and with administration and with our boards of trustees, whether it's foundations or whether it's universities, they need to see people who have experienced what they have experienced. They need to.

That isn't to say that only an African American can work with African Americans, but it is to say that if we're going to serve the people of this country, all of us need to feel included and feel welcome. And we're finding at the Foundation that different people come to talk to us now since we've changed in the last seven years from one person of color on our staff to 31% of our total professional staff in the United States as people of color. I'm not saying that to brag; I'm saying we had to do that because we weren't getting proposals from the right people. We weren't having people apply and come through our front door or write to us.

We have got to work harder at the whole issue of diversity. When people come into meetings with faculty and with administration and with our boards of trustees, whether it's foundations or whether it's universities, they need to see people who have experienced what they have experienced.

If we in universities are going to accomplish the outreach mission that we are talking about, we need to reflect even more the diversity of this country. And I mean diversity in its broadest sense, not only in the most obvious that I've mentioned.

Finally, as we work with you in partnership, we're encouraged by the growing commitment to helping people solve their own problems. Whether we're talking

about land-grant universities or not, we're finding many universities—but not enough–and many faculty but still only a minority in some cases—that really see the challenge and the responsibility (particularly of publicly supported institutions) meeting the needs of local people. And I've heard some discussion here about how we get that story told. And I don't know any way to be any more blunt—we've got to do it first! We have got to get out there and serve them. And for some of our faculty and some of our universities, this is a major change in attitude. I know we have been talking about structure, but I personally believe that all of us, including my colleagues at the Kellogg Foundation, have to work more on attitude. Attitude in terms of respect for diverse people in this country, respect for what others can contribute; and in our case, we need to follow the direction of our founder who said he didn't want to help people, but he wanted to help them help themselves.

We're delighted with your participation in this meeting. It tells us that you're willing and concerned. You're willing to put your shoulder to the wheel to make things happen. We believe not only that there is hope, but that the opportunity that's presented to us in land-grant and state universities at this time is unprecedented. The country needs what you have to offer, and we're looking forward to partnering with you to help you carry out the mission that I think we all feel needs to be done. It's really a matter of how can we —together with other agencies and other institutions—get that job done better. Thank you for all that you've done and for all that you're going to do.

REMARKS BY

C. PETER MAGRATH

PRESIDENT
NATIONAL ASSOCIATION OF
STATE UNIVERSITIES &
LAND-GRANT COLLEGES

With a nod to Pat Borich, I want to talk about actions we've got to take, and I think it is appropriate to summarize some of the themes that are important to us. We have had an interesting, stimulating conference, there is no doubt about that. The real question is whether or not there is going to be action and follow through in redefining and reinvigorating one of the primary missions of our state and land-grant universities in their evolving function of

service to society through outreach education. We have put together an outreach futures committee that consists of a number of state and land-grant university presidents. There will be letters going out to all of the CEOs that have participated in this Forum getting their candid evaluations and suggestions as to next steps. When we have received that material, we will caucus and see what we can and should do. It's very clear to me that many leaders and many kinds of leadership are needed for the effort. University presidents and chan-cellors are absolutely critical. They are the only ones that can do certain kinds of things in terms of the attitude adjustment that Norm Brown speaks of, in terms of dealing with some of the tough challenges that have to change within universities, such as the reward system.

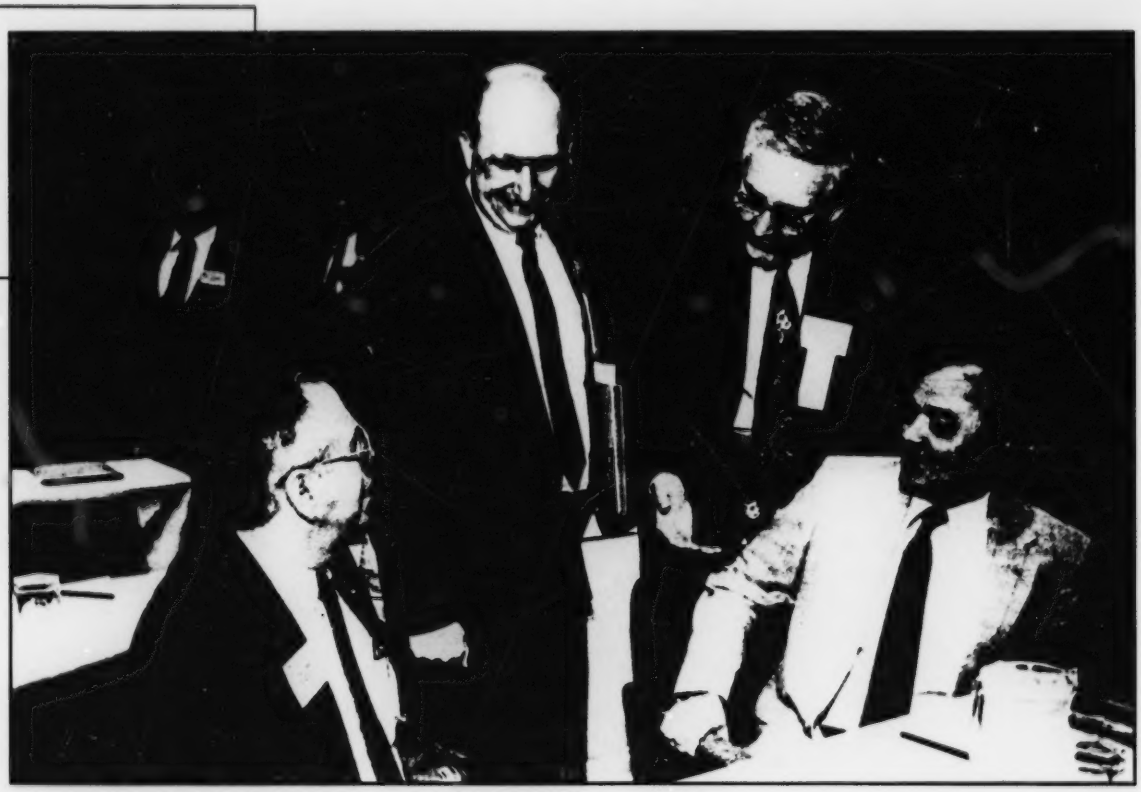
There is a story of a little boy who was deaf, or as we might say today, hearing impaired, and who never spoke a single word all seven years of his young life. Nevertheless, his mother cared for him with great love and tenderness and one morning as she brought him his breakfast in the dining room, the youngster suddenly said, "Take this damn lousy oatmeal back to the kitchen." "Darling," she exclaimed, "you can speak, I'm thrilled. I'm overjoyed, but tell me, why didn't you ever say anything before now?" "Well," he said, "up to now everything's been okay."

Well, the story of the little boy who did not like oatmeal and finally spoke up perhaps has something to say to us as very sophisticated educational leaders. Up until now, in our extension and outreach programs and in the way in which our universities have operated, everything has been okay. We have, in fact, done many things excellently, and we don't need to engage in self flagellation about the role and mission of our state and land-grant universities in the century that is now ending. But things are not okay now because the world has changed and is going to continue to change. And because the world has changed, the excellent way in which land-grant and state universities have performed their mission is no longer okay. That's why we are hearing calls for help in new ways and new directions from our underserved populations, from our inner cities, from our rural communities too often forgotten and neglected, and from small–and medium–sized businesses for educational talents, skills and collaboration in ways that have never been as forcefully pressed in so many bubbling ways as is the case today.

When I use the term land-grant I really mean it to apply to all state universities that are rooted in and serve their society based on the principle that the foundation of the university is not only inquiry and the pursuit of knowledge (research), but equally teaching and education to students in all kinds of settings.

Let me state up front one of my fundamental operating philosophical principles. I believe in the land-grant system, by which I mean the system and philosophy of extending the fruits of our educational skills and talents in collaborative (or partnership) ways to our society. Obviously, this philosophy has been the mission of the 73 designated land-grant universities and colleges focused in the past primarily, though not always exclusively, on agricultural concerns and involvements.

But when I use the term land-grant, I really mean it to apply to all state universities that are rooted in and serve their society



Members of the Utah State University Forum "team"

based on the principle that the function of the university is not only inquiry and the pursuit of knowledge (research), but equally teaching and education to students in all kinds of settings. And, just as important, making the fruits of knowledge available in practical ways that serve social and economic interests. The transmission of knowledge, if you will, so that it helps people in terms that they need.

I believe that education should be a seamless web and that it is a fundamental mission of colleges and universities to promote liberal arts education. I am a product of that kind of process at a land-grant university, the University of New Hampshire. But that commitment is in no way inconsistent with my profound conviction that the purpose of education is, or ought to be, broad, not narrow, inclusive, not exclusive, and people serving, not self serving. Without a healthy economy, there is no good life for the people. Without jobs and profits there is no culture, no art, no poetry, and without the arts and humanities we are all diminished.

Those who argue that the mission of higher education ought to be narrow and focused exclusively on studying and learning about the world but not being engaged with the needs of the world are dead wrong. They do not understand the true purpose of higher education. The purpose of higher education is to serve the needs of the people in ways that flow out of the skills and knowledge of our universities, whether it's a research university or a community college that also lives and breathes the land-grant philosophy of access and social service.

Social progress depends on economic progress and both depend

on effective sustained education that promotes understanding and knowledge and has leaders and faculty with the courage to extend that education to its society. That's a grand and noble vision. It was the vision of Justin Morrill, who understood that what he once called "new ideas with germs of power" had to be recognized, studied and applied. This therefore states my philosophical premise, or to put it in another way, this is where I'm coming from.

Let's take a look at the environment in which our universities operate. Both the United States and the world, and the environment in which all universities operate, has changed dramatically since the early fruition of the land-grant movement. For one thing, American agriculture today has totally changed so that only a tiny percentage of the population, less than 2%, are directly involved in production agriculture. The very success of the scientific revolution in agriculture, led by land-grant universities, has made archaic and unnecessary many of the practices and structures of the old or traditional land-grant model.

The basic principles — pioneering basic research in agricultural science; the application of science to agricultural and food problems; the dissemination of knowledge through education and its transmission in a variety of ways—all remain totally relevant. But even the concept of focusing the mission of the public universities on agriculture has become dated. Even the term "College of Agriculture" is becoming archaic. Today 30% of these colleges have dropped the purely agricultural label to become also colleges of life, natural or environmental sciences.

The National Association of State Universities and Land-Grant Colleges no longer has a division of agriculture. It's been replaced by a commission on food, environment and renewable resources. That name change is not merely cosmetic. Widespread changes are affecting American agriculture and its governmental organization. Under Secretary Mike Espy, the U.S. Department of Agriculture undoubtedly will and must change. But even more significant, look at the educational changes occurring within land-grant and state universities, including those that don't engage in agricultural or food related research and education. All of these universities today serve a variety of social and economic needs. Cornell University, for example, is a great land-grant university with many distinguished accomplishments in

agriculture. But the Cornell of today engages itself in a variety of educational issues that go far beyond the traditional agricultural mission. And so it is with virtually all of the original or traditional land-grant universities. And I can make this point statistically: less than 4% of their degrees today are awarded by colleges of agriculture.

Even more, the environment in which the American research university operates today, whether it's private or public, is one of change and adaptation. The demands for the services that our universities provide remain enormous, whether you measure them in terms of the number of students who want to come for a direct education, whether measured in terms of the public's desire for knowledge and solutions to pressing questions that can come only through research, or measured in terms of the public's desire to have knowledge applied to immediate social and economic needs and problems.

The subject of the environment of our universities is complex. It's pertinent to note, however, that the end of the Cold War, which provided an easy, almost comfortable rationale for supporting science and our universities, has been replaced by a new, perhaps troubling, but exciting era in which questions of economic competitiveness, internationalization of our universities, and environmental challenges will be the order of the next century.

Moreover, the research universities themselves have been leaders in the scientific and technological breakthroughs that have provided an entirely new way of communicating information through the technology of computers and electronic systems that are literally breathtaking. The knowledge generated by our universities has fundamentally changed the way in which knowledge and education are being transmitted and will be transmitted in the decades ahead.

The new land-grant model, which will continue to include food, and therefore agriculture, is a model of universities serving social and economic needs as determined by society through its elected representatives in collaboration with university leaders on a basis of mutual discussion, negotiation, and trust.

One can and should have many debates as to the proper role and mission of the university. It is and must be an endless discussion, and it's one that our faculties enjoy participating in. But I am unequivocally on the side that the role of the university is not only to discover knowledge and transmit it to society through the direct educational work of teaching students, undergraduate and graduate, but it is equally the role of our university to serve and be responsive to society's needs by applying the talents of education to social and economic needs. This is my view, both because I believe it's the appropriate justification for the public university, but also because the successful application of knowledge which includes the education of students, is also the pragmatic road that universities need to take if they wish to generate the kind of support in resources and in public understanding for their educational mission. I have never believed in the so-called Ivory Tower concept—few universities have ever been that isolated. I am tempted to note that since ivory has now been appropriately banished from world consumption, maybe ivory towers could be banished too, as well as the ivory walls that block us within our universities.

The new land-grant model, which will continue to include food, and therefore agriculture, is a model of universities serving social and economic needs as determined by society through its elected representatives in collaboration with university leaders on a basis of mutual discussion,

negotiation, and trust. It's a model based on the premise that knowledge is indeed power, power that must be applied to meeting the needs of the society and of the world. It is the land-grant model in the sense that it is based on the principle of extending the knowledge—reaching out—to meeting ever-changing social, economic, and human needs. It's a model that is manifest in America's public universities, and indeed in many of the nation's private research universities. It involves extending and linking universities with businesses, with community and social state and federal agencies, and with volunteer public service associations in order to deal with environmental and other social challenges.

The public universities have changed and broadened their mission and role and continue to do so. It is interesting to note that the original Morrill Acts of 1862 and 1890, in addition to having that great mandate to deal with agriculture, were then to have developed teaching and service in what was then called the "mechanic arts" and which we now identify as engineering. But while these universities did provide instruction in various sciences and engineering, the funding and the mechanisms for research in extension were never provided at the national level as they were provided for agriculture. Today, as the National Academy of Sciences has noted, there has been "a virtual explosion over the past several years in the number and variety of university industry-alliances." It's very clear that even more of this activity in the administration of President Clinton is going to take place because of the self-conscious need to address economic and social concerns in the post Cold War era. There is a push and there is going to be some outcome in terms of an industrial extension or manufacturing extension service.

Mary Pankowski

I am convinced that there is a bright future for our public universities and the core land-grant mission. But I am equally sure that that future will be much dimmer if we do not restructure and change the way in which universities organize themselves, see their value and mission, and serve society. Change is coming and American society, while still needing that good old oatmeal of the traditional land-grant system, needs a whole variety of new tasty and nutritious economic and social dishes. The models, the delivery mechanisms, and the talents are there if we listen, are willing to participate collaboratively with allies in business, government, and our communities, and are willing to lead.

I'm here because I believe the order of the day is thoughtful, focused change brought about by committed leaders—and supportive trustees, presidents and chancellors—who make restructuring and revitalization of the land-grant mission a personal priority, and extension directors and others, other academic officers, who can put together the new structures of service to society through outreach.

Now organizational questions can be boring, but let me simply note that the association I'm privileged to lead has restructured itself through commissions focusing on specific issues and opportunities in a flexible, interdisciplinary way—to use that jargon we all love so much. We have a Commission on Outreach and Technology Transfer, and it's addressing specific opportunities of the moment, such as industrial extension, and the role that our public universities can and must play in that effort. But it's also examining in specific, and ultimately practical, ways four issue areas: economic competitiveness, which will include the industrial extension and work force education issue; community service, the national community service thrust; youth issues, including questions surrounding the reauthorization of the elementary and secondary education act; and how to align the mission of our public universities with the institutional environment in which they really operate today.

Similarly, our Commission on Food, Environment, and Renewable Resources is organized on multi-disciplinary lines so we can bring together natural collaborators who have not always collaborated

Don Hanna (left) and Thomas George

at our universities. Two other commissions are equally germane, one dealing with information technologies and its dramatic impact on education so that we can best use the resources of technology in this new world of computers and electronic communication. That commission is also engaging itself on the subject of distance learning, which, of course, intersects with our Commission on Outreach and Technology Transfer.

Our new Commission on Human Resources and Social Change is engaging itself on the question of youth, on national service, undergraduate education, and the enduring question of access and opportunity for our underserved populations. There are two other commissions. One is on the urban agenda. Our universities, including the historically land-grant ones, all serve urban needs and indeed suburban and of course, rural ones. In fact, they should all be seen as serving American and international needs, not narrow, confining, and ultimately irrelevant categories. And, appropriately, our sixth interdisciplinary commission focuses on international education. If you've noticed that there is an overlap in there, that's precisely the way it ought to be, not just in an association and its commissions and committees, but within our universities.

About a year ago Pat Borich gave another thoughtful, provocative talk on the subject, "Can Extension Change and Still Survive?" Those of you who heard him this morning know that Pat is perfectly capable of speaking for himself. Let me answer the question this way. If "big E" Extension does not change and adapt and adjust, it will not survive and ought not to survive. Precisely the same point can be made of our state and land-grant universities. If they do not change and adapt, they will undoubtedly survive but as mediocre, dull places.

I was recently asked to submit a short essay answering the question "What does society need from higher education?" I'm going to summarize my response because it is the mission that the universities, and note that I am saying the universities of the National Association of State Universities and Land-Grant Colleges, must be about in the years before us.

What the America of the 21st century needs from higher education flows directly from the philosophical spirit of the land-grant movement.

What the America of the 21st century needs from higher education flows directly from the philosophical spirit of the land-grant movement. This is the spirit and application of "hands-on engagement" on matters that are essential to our society and that include the talents and skills that higher education can uniquely provide.

My list of what society needs from higher education—and that higher education can and must deliver—does flow from one fundamental assumption: it is absolutely essential that the base financial support for universities be adequate so that quality research, both pure and mission oriented, and quality teaching can be provided to our society.

There are no cheap, easy shortcuts to having a system of higher education that responds to the needs of society without an appropriate investment of resources to accomplish that mission. But the willingness of American higher education to show that it is eager to engage on critical issues of national need is also the best guarantor that the required investment of resources will be forthcoming. For example, in the Sputnik period of the 1960s, American higher education did not sit idly on its hands complaining and being a reluctant dragon before engaging scientifically with the federal government to meet the challenges of Cold War competition. Quite the contrary, we were eager suitors and participants in meeting that challenge. And so it must be now on three issues that I personally propose as critical.

The first is that society needs, and American higher education must provide, a front and center engagement with the issues of elementary and secondary education. With some very notable exceptions, those leaders and faculty of our colleges and universities have not made it a priority to involve themselves in a direct hands on collaboration with the business and industry and leaders in public elementary and secondary education to strengthen those many public schools that are in dreadful circumstances. This isn't the place to sketch out the problem. It's well understood. But it's equally true that American higher education has not shown itself as engaged both in deed and in perception with the movement to reform or improve our nation's schools. Society needs this commitment from higher education, and we have many of the talents appropriate to that task.

The second area of need has to do with the core land-grant philosophy of extending the fruits of education in direct, practical ways to the needs of business and industry through outreach or extension programs appropriate to the 21st century. We have done this in agriculture with stunning success, and we have done it in more global ways by serving the interests of the federal government in defense and scientific research

tied to the challenges of World War II and the Cold War. As with the challenges of elementary and secondary education, there is no lack of models for successful collaboration, but there is too little extension and expansion of those models.

Our universities are absolutely capable of providing—in collaborative partnership efforts— trained agents and applied researchers who can link themselves through an industrial or business extension service to meet the needs of small- and medium-sized businesses. That's the growth sector of our economy, the sector most in need of the kind of economic and informational skills that flow from universities. This endeavor must also involve vocational education and retraining, which can and should be done in collaboration with the nation's community colleges and vocational technical institutes.

Universities ought not to overpromise, and alone we cannot save or strengthen the nation's economy. But unless universities, in fact and in perception, deal with economic issues by contributing their talents directly and visibly, two things will happen. The nation's economy, in my judgment, will not thrive and prosper and universities will not receive the support they deserve. Precisely the same principles apply to improving our system of elementary and secondary education.

The third need of our society may appear more abstract and perhaps whimsical. It's the need for international education. Our society needs education and understanding about the world as never before, because its complexities and interrelationships economically, socially, and politically are even more dramatic and manifest than they were during the Cold War. Higher education has the special talents and resources to fulfill a great American need — educated men and women who understand the world of which we are inescapably a part, who can speak languages other than English and who can function in complex cultural environments. Unless our colleges and universities are at the forefront of truly internationalizing their curricula, fostering relationships with people from other lands, and promoting study and research collaboratively on international issues and interconnections, America will not be equipped to meet the challenges of the next century. This engagement with international education applies as well to the need of elementary and secondary schools to be cognizant of the internationalization of our world. And the need for business and industry to be able to function intelligently in our frustratingly complex world. All three of these needs of our society, I believe, are interrelated.

I hope you have noticed a common theme to these three needs that I identify as critical. All three involve reaching out, outreach education, whether it's the linkage with the elementary schools, the extension of programs geared to business and industry and agriculture, or the linkage with the rest of our interconnected world through international education.

I personally can't think of a more exciting challenge for those of us here and for our brothers and sisters in the state and land-grant university movement. These challenges, or other ones you might choose to emphasize, can be met if we understand them, have a broad vision of what our universities must be in the years ahead, and if we have leadership. The challenge is here. We should all go to work.

ALTERNATIVES: DIALOGUE/Q&A

QUESTION

BILL MOORE, SOUTHERN UNIVERSITY. How can we get state government, businesses and industry involved in attracting our best and brightest students to the teaching profession, given the low pay and lack of respectability afforded to teachers?

KOLBERG

This is a societal challenge. Clearly, you can't do it alone, and it's going to take us a very long time, at least a generation and maybe more, because it requires a cultural change. The leaders in American business understand this about teaching, and its central importance to education reform. I think American business now begins to understand the problems that the universities have had in trying to build a top notch school of education and then attract the very best students to that. And we're willing to help. But it will take us a very long time, and it is going to be very difficult.

Let me add, however, that I don't hear this emphasis coming from the colleges and universities. I don't see the leadership, and yet the leadership must come from you. You're the ones who know more about transforming education than we do. We now understand the challenge. We're now working closely, as best we can, with those who lead the K-12 education system. But I think that we're missing a very strong continuing voice from those of you who lead the nation's great institutions of higher learning. It seems to me this challenge is so endemic and so crucial and so central to everything that we talk about. I would hope that you would get more active, more forceful, and be a very important part of what I perceive to be the most important national challenge.

PACHECO

I've been perceiving, at least for the last two or three years, a change in this situation. We are attracting better students to the colleges of education to go into teaching. I see our national associations becoming more and more concerned about this, and one of the things that I am most encouraged by is the National Board for Professional Teaching Standards which includes people from industry, people from the colleges of teacher education, and people out in the professions. And I think we're seeing the genesis of some changes that are going to occur, and I'm glad to see that this progress is being made.

QUESTION

DAVE CALL, CORNELL UNIVERSITY. While I agree with everything that has been said about greater outreach, in the last four years my college has lost 60 faculty positions. We've gone two years without a pay raise. Demand is being placed on us to put more time in the classroom. Our state budget is still unbalanced. Let's face reality. How are we going to accept the challenges you have laid before us without addressing the resource questions?

BROWN

Without an adequate base of resource, there are some things that we simply cannot do. We do need a base of resources and support. I believe that. But I also believe that enough change and impact has happened that there is some attitude reassessment taking place on faculties, and certainly on the part of leaders, such as our CEOs. We have to simply try to make some changes.

MAGRATH

I think the key concept is ownership. I don't think we have enough shared ownership of our universities. We have talked to ourselves too much. I know we've had extension efforts, but too often, we haven't built a sense of ownership at the grass roots level and we need to review how we go about that. I am optimistic that people are going to invest. The economy is going to improve, and they are going to be willing to invest in those things that they think are important. I'm not sure we're ready at this point for a big investment in higher education unless we get more people to invest of themselves and feel a sense of ownership of their universities.

QUESTION

FRED HUMPHRIES, FLORIDA A&M UNIVERSITY. How might we interact with a broad-based school system? What would be most advantageous so that we might present a more coordinated entry into it?

PAYZANT

My sense is that on most college and university campuses, the teacher training institutions, or the schools of education, are pretty far down the list. Thus, within your own institutions, it's often difficult—in terms of the status issues and the pecking order for people from the engineering school or from physics or history or literature—to team up with people from the school of education who are directly involved in teacher training and other direct connections to schools. Now how do we in the schools respond? I'll give you an example. We've got a terrific program going with Frank Holmes, who is in the engineering school at San Diego State University. He's working in mathematics with 2nd, 3rd, and 4th graders in our schools. Also, it seems to me that the people in some of the other professional schools in arts and sciences don't think the people in the school of education can hold a candle to them in terms of their expertise in the discipline; often the people in the school of education don't think people in arts and sciences and other places can hold a candle to them in terms of what they know about teaching and learning.

Now, if we could just get people to come off those positions and form some interschool, or interdisciplinary, kinds of groups, it would be a lot easier for us to make that connection. I'll work with the biology department or I'll work with the school of education ***and*** with people from the biology department.

LAVINE

There has to be strong political leadership. The political leaders of all communities really have to make a commitment to working with you. In Baltimore, the mayor has asserted himself in terms of getting the higher education community involved with the city—particularly its school system. He's also organized the business community. Mayor Schmoke has gone out and talked to the Greater Baltimore Committee (an organization of all the large businesses in Baltimore) and told them, "Listen, we need your help. We need to get the universities involved. We're all on one ship, and we're either going to hang together or we're going to hang separately." And I think that's really what it takes—a global strategic thinking about the whole thing and saying, yes, the university is very much a part of the community. And the success of this city, the success of this urban community, is connected to whether or not the university is a success—and is involved.

QUESTION

DUANE DALE, NELD INTERN, MASSACHUSETTS. As many of you know, there is a long tradition of Cooperative Extension work in public policy education, helping to frame the questions and to interpret information in ways that bring it to bear on the questions of the day. One of the problems with faculty/scientists who are new to public policy education work is that their disciplinary training is prone to incline them toward a role of coming up with the right answers, rather than helping to grapple with complex questions that don't necessarily have right answers, but have value dimensions. Can you suggest how the universities can prepare their current or future faculty/scientists—and their current students—to be effective participants in dialogues around technical issues?

SPIKES

One of the most effective ways is to get people from different disciplines together. When we established our Center for Energy and Environmental Studies we insisted that it be interdisciplinary. So, there are social workers, chemists, civil engineers, physicists, and the school of public policy nursing involved. All of these people were brought together, and the goal was to look at proposals in terms of ways in which all of these entities could be involved. And when you get different disciplines together talking among themselves, they are less likely to think there is one right solution because the "right" solution is not always the one in my discipline. You can also be more accommodating when you have different views from different disciplines. Very often there is NO answer that can be deemed either right or wrong. But if you have different disciplines coming together, I think you're likely to reach your goal.

QUESTION

BOB MILLER, UNIVERSITY OF RHODE ISLAND. A number of the priorities the panel has discussed do not necessarily involve higher education. For instance, the apprenticeship program may be much more appropriate for industry, or even the community and technical colleges. Likewise, in many states, we're feeling a conflict with K-12 education and higher education. And we're talking about a Cooperative Extension effort that in some ways requires greater resources. Where does the whole university fit in?

PACHECO

Universities need to be involved in "knowledge transfer." When we form our taxonomy of the kinds of activities that we should be involved in, knowledge transfer should be paramount in our minds. We're in the business of knowledge transfer, and to the degree that all of these things that we are talking about involve conveying information that we've gained from our research, from our investigations, then to that degree we should be involved in this enterprise. Universities cannot be the primary agents in actually going out and preparing the work force, but we can provide the information that's needed about what seems to work. We've all been talking about establishing our priorities and not trying to be all things to all people. Nonetheless, I do believe that we have some responsibility for transferring the knowledge that we have, and maybe that helps in determining what we do and what we don't do.

KOLBERG

The world is not going to allow you to remain the same way you are. I don't think there's any question about it. I don't think there is any institution in our society that ten years from now will look anything like it does now. The transformation that has been going on in our great companies—the IBMs and General Motors of the world—will finally get to the rest of the institutions sooner or later. What we've been talking about is urging you to think about the people that you haven't thought about educating before, and to help all of us figure out how to better educate those people, how to better change the institutions in which they work, and how to give them the knowledge they need, lifelong, to do that. So far, you have only focused on 25% of the population. We're asking you to think about a broader segment of the population. At the same time, I'd urge you to think carefully about all of the resources that you have to bring to this huge challenge.

QUESTION

JOHN TAYLOR, LINCOLN UNIVERSITY. How do we bring this collaboration together so that our agencies all across the board are working for the common good and are all working at the same job?

PAYZANT

It has to start with leadership in our respective institutions. Then it has to translate to thinking in terms of reform more systematically within city schools. In San Diego, we've got five elements of that systematic reform strategy. The *first* piece is curriculum, instruction and technology. The *second* piece is assessment and accountability. The *third* piece is looking at the integration of services for children and youth. The *fourth* is issues of quality and high performance schools and high performance school districts—continuous progress, quality issues. And the *fifth* is public engagement and support. And in that public engagement and support comes the major piece that you're talking about—collaboration. So, leadership and strategic planning in the respective institutions make collaboration one of the major elements of their systematic reform effort.

QUESTION

HARRY BELL, CLEMSON UNIVERSITY. I'm President of the South Carolina Farm Bureau Federation, and I have served as Vice President of the American Farm Bureau Federation. I've heard this panel call for a redirection and a reorganization of the Cooperative Extension Service (CES). But there are those of us in agriculture who think that there are areas of work that very desperately need attention from the Cooperative Extension Service. Yet, many are asking for reorganization and redirection at a time when those of us who are CES recipients have a greater need for the extension service to serve agriculture. The problems we are facing are tremendous. Someone give me a perspective on how the givers are going to benefit from this entire process?

PACHECO

I was not trying to imply that there was anything wrong with the system that exists. In fact, I think we're recognizing that what has happened is pretty good, and that maybe we can use that as a model for making sure that we extend knowledge in areas other than agriculture to a population which badly needs it. Coop Extension is a model. But from a practical standpoint, we need to find the organizational structure that is going to allow us to move forward in a variety of different areas, possibly using that exact model. I don't think that we would be here if that model hadn't already been successful. And so we're trying to—at least from my perspective—build on that rather than necessarily change it drastically.

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QUESTION

RACHEL TOMPKINS, WEST VIRGINIA UNIVERSITY. We are beginning to see a great number of connections between industrial extension and the work that we in Extension do with small- and medium-sized manufacturers as they implement new technologies and need training and changes in their work force. So we—the folks in labor education and the folks in industrial extension—are working together. But, at the federal level, I don't see Mr. Kolberg and his colleagues, and I don't see the AFL-CIO, at the meetings that involve the development of industrial extension. It will be helpful for those of us who need to put those things together if, at the national level, we saw the kinds of collaborations that bring *you* together. Is this type of collaboration going on? And if not, why not?

SHIELDS

To be quite honest, in the last 12 years labor has not found it easy, or even had invitations, to be in that partnership. We are looking forward, really, to working with the Department of Commerce and the Department of Labor. And I'm delighted to hear that you're making those connections at the university level, which we have also found quite frustrating. We have also, quite frankly, been looking at our own inability to provide our own group of full-time, trained pro-labor, human resource advocates dealing with education and training issues at the state level.

KOLBERG

From my perspective in Washington, the governors are going to take the lead in this for the government. They ought to be involving you. They ought to be involving the community and junior colleges. And I hope that you are there not only offering, but helping and pushing, to get this thing organized in the proper way. I'd relate it to what was said earlier about Cooperative Extension and agriculture. The point here is that business, universities, higher education, and the entrepreneurs themselves worked together to build the kind of an industry we have in agriculture in this country. We can, and must, do the same thing right across the board.

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QUESTION

ERNIE SMITH, OREGON STATE UNIVERSITY. Can you define whether or not outreach is different from, or inclusive with, public service? If so, how do we relate it to the university rewards system? I think it is key that we give our faculty something to shoot for if they are going to engage in outreach.

CARTWRIGHT

In *Scholarship Reconsidered*, Ernest Boyer advances the concepts of discovery, integration, application and teaching. Many thought that these were simply new labels for teaching, research and service. But, as more people began to discuss the concepts in forums on their campuses, they began to understand that Boyer was urging a reconceptualization of our work as scholars. He was urging that we think of a circle that begins with discovery, leads to integration, application, and teaching, but always comes back again, so that discovery informs the next flow of ideas, of applications, and of teaching. And, thus, the more people begin to discuss those reconceptualizations in depth, the more we see the possibility of the rewards systems changing. There will be new ways of documenting quality, and new ways of identifying criteria for advancement.

BORICH

The definition itself is not the value, it is the discussion that we go through to get there, the discussion that we are having with faculty and administrators on the campus that is important. In Minnesota, we decided that service is what we do with teaching and what we do with research—in fact, service to the people of Minnesota and the world. And we then defined outreach in two ways—academic and non-academic outreach.

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QUESTION

NEIL BUCKLEY, WEST VIRGINIA UNIVERSITY. **Service perhaps is still viewed as more marginal than it should be in the missions of our institutions. One remedy suggested at this Forum is a revision of the rewards system. Would you suggest that we focus on the individual or try to focus at a higher level, perhaps the college or university level? Should we acknowledge that we may end up with individuals who aren't particularly strong in all areas, but that a more critical measurement is what we deliver as an institution, or perhaps at the department level?**

BROWN

I would argue that it might be best to try to focus on individuals across college lines, because if you focus exclusively on one or two colleges, given our culture, then those become the service colleges. And we know how much prestige that has carried historically. So, I would try to go with a number of individuals in a variety of disciplines cutting across various collegiate lines.

MAGRATH

Personally, I think that we need to start at the top in articulating the vision and the expectations, particularly at hiring time, and at time for salary increases and promotion. I would argue that at any given time in a person's career, they may have more emphasis in one area than another, but the team they are on, and the teams they participate in across the university, need to be making that contribution. For example, if I'm working in teaching heavier at this point in my career, I need to be extremely supportive of those that are putting more effort into off-campus teaching or into research or whatever. We need to look at this as a team effort. But much of this is attitude. We need to hire people who understand that kind of responsibility of the university.

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QUESTION

BOB WELLS. NORTH CAROLINA STATE UNIVERSITY. At both the national and state levels, there are suggestions that a manufacturing extension service, or technology extension service, should be modeled after the successful agricultural extension service. Implied in such a comment is the feeling that agriculture and forestry are declining industries. What suggestions, or strategies, would you have for using public institution resources for a total economic development strategy, rather than a sector specific activity, and the use of existing resources rather than the redundancy of creating parallel and competitive systems?

RAWLINGS

Instead of replicating systems and more structures, you start right at the top. You go to the business leaders in the state, the governor, legislative leaders, and you put together a group that will talk about precisely how to do this, using the resources of the universities and the private sector together. It has got to be personal, it has to be very close, and it has to be a relatively small group. Then you can work down within the institutions, both private and public, in order to put together the databases that you're going to need, and so forth. That's far more effective than trying to develop a whole new university structure on the model of the agricultural extension system.

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QUESTION

I wonder whether we've given up on the American people—whether industry, unions, and higher education are afraid of this diversity we have in our nation. They are not charging forth with the full belief in the people and exploring it in a creative way. It seems to me that one could conclude that business, unions, and universities have given up on this emerging population in America and are taking their business elsewhere to propel a nation for tomorrow.

PACHECO

I certainly have not concluded that. In fact, I think one of the problems we face is that we have not taken into account, nor have we taken advantage of, this diversity that exists in this country. Somehow, we need to harness that energy and harness that desire and turn it into the kind of productivity that we know can emerge. Perhaps higher education has done a better job of at least recognizing that this is what needs to be done. But I don't know if we've done a particularly good job of changing ourselves so that we provide the kind of access that is needed. Still, I think the recognition is there and we're working hard to make sure that those opportunities are made available. Diversity is one of the strengths that we have and we need to find a good way of capitalizing on it.

SHIELDS

That was not the impression I wanted to leave at all, because, in fact, our joint programs have made opportunity available for a very diverse work force to keep learning and moving ahead. While we're not where we would like to be, we definitely are on the right path. There's optimism ahead. We have a great deal to do, and we all have to recognize that our own institutions need to help us to address change in the way we do business, in the way we organize workers, in the way we look to new fields, as education does.

KOLBERG

We have not been as good as we need to be. No, we're NOT giving up on America. The diverse work force we have is still the most productive work force in the world. And we need to add the training, the education, and all the rest along with very good management. Management in the United States ought to come in for a great deal of criticism for not staying up with the kinds of things we're talking about. Change is very rapid, and we need to begin to figure out how to better adapt to that change in management, in labor, in higher education, wherever it is.

QUESTION

J.C. SHAVER. NELD INTERN. UNIVERSITY OF MISSOURI. If we are in a world where foreign nations are now the communities next door, isn't there a higher order of goals that we ought to be looking at in the future, as opposed to competition just so the United States can maintain the highest standard of living in the world?

KOLBERG

In the best of all worlds, that ought to be our goal, but, try to sell that to the American people—that somehow our standard of living ought to drop so that others can raise their standard of living. That's not the best political platform to run on. The most important thing we have is a democratic society in which all people participate, and that we're trying to build an economy in which all the people participate. This should be our goal, as well as the highest standard of living.

QUESTION

TOM JOHNSON. NELD INTERN. VIRGINIA. In recent years, there's been a lot of private sector involvement in areas that are traditionally part of the university in providing education. How can private sector providers of educational services and outreach activities work more closely with the university?

JIM RYAN

The human resource development needs of the marketplace are so vast that we'll need all the energies of both the public sector and the private sector together to meet them. Now, some of those will be done independently, but many of them can be done, and should be done, in partnership. I don't think the public/private partnership in the next 10 years will come close to addressing the human resource needs in the marketplace.

One of the programs we at Penn State are most excited about is our Master's Degree in Acoustical Engineering, delivered largely by distance education. Offered under contract with the Department of the Navy, the instruction is delivered at three sites—Philadelphia, Pennsylvania; Keyport, Washington; San Diego, California—through four different modes, largely one-way video/two-way audio. In addition, the students have on-line interaction during the week with the instructor. Faculty members also visit each of the sites several times throughout the semester. The distance education module accounts for eight of the twelve graduate courses with the additional four courses offered two successive summers at Penn State in residence. I think that's a good example of the kind of partnership we're talking about.

QUESTION

MARTIN MASSINGALE, UNIVERSITY OF NEBRASKA. What are you doing, or what have you done, in the area of elementary schools to get people working together as groups or in teams and evaluate those members of that team?

PAYZANT

We're doing several things—and it's very much in the early stages—on *cooperative learning*. It's basically the notion of getting young people to work together in teams where they are given a common task. The teams are structured by the teacher—maybe three, four, or five students—and the effort is made not to just group the students in the team based on some external criterion called ability, but to get a cross section of students who are working in the team, based on the assumption that they can learn from each other and also that they will contribute different things to it. There's a lot of cooperative learning going on in the elementary schools, and now the secondary schools are a bit threatened by that because they are traditionally organized in a different kind of way.

The second thing we've done is to invest quite a bit in teacher professional growth activities with summer institutes where we bring teachers together from different disciplines to work as teams, using themes that cut across their respective disciplines. Then they go back to schools and function as teams and, hopefully, model the behavior for some of their colleagues.

QUESTION

BILL MOORE, SOUTHERN UNIVERSITY. There appears to be an incompatibility with the rate of change that's taking place in society (technology and otherwise) and the resistance of universities to respond to change because of the academic culture, academic freedom and various aspects of faculty governance. How do you reconcile those two views, namely, the resistance of change in the university and the rapid rate at which this country is changing?

JOHN BRIGHTON

Let me start by saying change comes about with great difficulty in universities. While we at Penn State are going through a process of change through our strategic planning, industry and the corporate side haves been going through change, rapid change, over the past several years. It's partly driven by crisis, partly driven by the need for economic responses to external conditions. Universities aren't made that way, exactly, and, I think, within the ranks of the university there are many people who don't fully appreciate the need for change, and part of our job is to help that happen. But one of the ways that we're doing that is in our collaboration with major industry in the total quality effort. That particular activity and that particular approach is very helpful to us in bringing about change in the university. So, we're collaborating with a number of companies to bring in the concepts, the principles, and ideas of total quality, to help change the culture within the university to promote the change that needs to be made.

QUESTION

BOB CARUTHERS, UNIVERSITY OF RHODE ISLAND. It might also be argued that America's other great contribution to higher education is the development of the community college. Could you talk a little bit about how the responsibility for educating the front line worker ought to be distributed between community/technical colleges and the land-grant institutions?

KOLBERG

It seems to me that one of the country's best kept secrets is that we have community and junior colleges and technical schools in every single state in the union! There is hardly a community that doesn't have one within very close commuting distance. This is a classroom resource around which we could build the technical assistance capability needed by the people and the entrepreneurs in that area. It isn't there now. There are only a few community and junior colleges that have that kind of know-how.

And why shouldn't we have a two- to three-year curriculum on manufacturing? A manufacturing associate curriculum built by the educators of the United States, along with industry, that is the same general curriculum used in every single community and junior college and is certificated so that when you graduate, all employers will know the kinds of skills that you have learned along with the time you spent on the line in the local business. We haven't done that yet. We aren't anywhere close to doing that yet. What is your role in working to build that kind of system?

SHIELDS

We have always believed that community colleges are close to the people and close to the needs and have great flexibility, but we also believe that the partnership should include business, education, government, and labor. We feel that education at the community college level shouldn't be constrained to technical training, because these institutions also move people forward into liberal arts at the upper level. They are uniquely qualified, and have demonstrated that they can be flexible, and so they should be models. I think your institutions should study how junior colleges are able to move quickly to help businesses in a very flexible way.

PACHECO

I don't think we've found the formula for making sure that the interface between universities and community colleges occurs. We've made a lot of progress in terms of the academic dimensions, but I don't think we've done very much in terms of the skills development or how we should share the responsibility for creating the kind of work force that is needed.

QUESTION

Are we moving to a patient-centered, decision-making health care system, or are we moving to a system that will have many more choices built into it as a matter of containing costs and trying to get statistically higher levels of health in relation to what it is going to cost to get there?

HARDIN

The question you pose is the one that Mrs. Clinton and her group are going to have the most trouble with. We're not going to be able to deliver the acceptable level of health care to all persons regardless of need, unless we put some limits on the public expense attendant upon extraordinary health care, particularly end-of-life health care. And I don't know, maybe we're going to find an analogy in the public health system of Great Britain, often characterized as socialized medicine. Even if you're a stranger in England, if you've got a health care need of a basic sort, you can get it met. You may have to wait a while in a clinic, but you can get it met. Now, if you want extraordinary health care, you can also get that, but it's going to cost you a ton at a private delivery system of some sort. And I expect we'll always have some private delivery systems. But I guess what's going to happen is that those who want the extraordinary health care, particularly end-of-life health care, and can afford to pay extravagant prices, will get it. But I don't think we're going to find significant health care reform, and we're really on dangerous ground if we think we can deliver that kind of expensive health care to everyone.

BULGER

If anyone thinks that America is going to accept managed competition in its pure form—which says that everybody is going to go through a primary care gatekeeper—they're being unrealistic. There aren't enough people out there to do that. But, in the end, all politics are local. An informed patient can begin to make choices, and, maybe in the not-too-distant future, most of the big time intervention that we all face will come down to that kind of informed personal decision. We may, in fact, ration ourselves more effectively than any government might do.

MCCAULEY

I believe that we are responsible for our health long before we become patients. Also, there is a model for health—called the "chicken soup" model—that says X number of illnesses don't need any care and treatment and we as Americans seek care and treatment when we often don't need it. We also know that about 30% of procedures and treatments are unnecessary. We have to become involved as consumers in making those kinds of decisions which, for us, are going to be difficult decisions.

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QUESTION

BRUCE WEIRSMA, UNIVERSITY OF MAINE. I'm Dean of the College of Forest Resources, and we have a close working association with many industries. We also work closely with conservation groups and environmental groups. We are perceived at times of having a bias, and are accused of having a bias, solely because we work with our industry associates.

WHALEY

In terms of how does one develop collaborative arrangements with industry without carrying that mantle of doom—that somehow you're in their pocket and serving them rather than better societal will—I guess I don't see that as an issue. At least on our campus, every time the environmentalists accuse us of being in the pocket of industry, the industry accuses us of being on the "funny fringe of environmentalism." So, as long as they're all angry at us, I think we do it about right.

QUESTION

KAREN VARCOE. NELD INTERN. UNIVERSITY OF CALIFORNIA. When we talk about natural resource management in California, we have to talk about endangered species. I haven't heard any of you mention endangered species. I'd like to know where you feel endangered species fit in natural resource management, especially in relationship to maintaining economic vitality?

SPIKES

Part of the aim of resource management is to look at ecosystems rather than to look at one segment of a resource. You really can't look at, for example, water preservation or conservation without also looking at endangered species. I know that Canada, for example, has a problem with water which is being rerouted southward because it's disturbing the ecosystems of fauna and flora that thrive in those particular ecosystems. And that's why the notion of an integrated system of management is advocated—you've got to look at all of these things together to see what the effect will be.

WHALEY

The apologists on both sides of that argument are not particularly helpful. The industry would lead one to conclude, I think, that if one moves ahead with the Endangered Species Act, they're going to go out of business. I think that simply is not the case. On the other hand, you'll find those in the environmental community who think that if you remove a tree, somehow you are going to remove an endangered species. And that seems to be the basis on which that argument is being fought right now. I think Dolores Spikes has the answer—we're going to have to move towards some kind of landscape-level management/ecosystem management, which I think in the long haul will protect our ecosystems and their diversity and will have minimal impacts on the consumers of forest products. I think that is the role that universities should play, because that is where the interpretation of information can be brought to bear on public policy issues.

QUESTION

GENE ALLEN. UNIVERSITY OF MINNESOTA. How can we bring a global, international dimension to our students, future graduates, and employees, especially in an area like natural resource management?

SPIKES

There is a lot that universities can do with respect to having debate and discussion on policy related to resource management. For example, it's only been within the last several years that monies given as aid to other countries have been tied to some kind of impact study related to the environment, especially some of the agricultural projects. What is the policy of the U.S. going to be with respect to resource management in other countries? For example, are we going to say that as a condition to receiving aid they will have to do certain things relative to resource management? And, conversely, will foreign countries make similar demands on us? I believe that universities can help students to better understand what the implications are, policy-wise.

QUESTION

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MARY WALSHOK, UNIVERSITY OF CALIFORNIA-SAN DIEGO. There is an assumption in the land-grant universities that service and outreach are housed either in Coop Extension or General Extension. Shouldn't the outreach and public service missions reside in *all* corners of the university?

RAWLINGS

Today, it's everybody's job to do outreach. English professors can, and often do, great outreach. It's just our use of terms that we get hung up on. But, we do need a full institutional commitment to it. The bottom line for me is that we have a society that's got a lot of problems, and we have very great universities. We ought to start putting those universities in the service of society far more than we have in the past. It's incumbent on deans of law, medicine, engineering, liberal arts—just as it is on deans of agriculture and heads of extension services—to conduct outreach in this way. They ought to be held accountable for it, and so should department heads. We all know that is the way you get things done within the university—you have to hold people accountable at all levels.

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QUESTION

BOB SIMMERLY, UNIVERSITY OF NEBRASKA-LINCOLN. Many of us are dealing with the very difficult issue of how we can do a better job in demonstrating to the many publics that we serve the return that they're getting on the investment in higher education. For example, if one of your portfolio managers assists me in selecting a portfolio to mirror one of the stock indexes, that's a measurable kind of thing. In education, it is often less clear, and yet we have tremendous demands to do that. Do you have any advice for us on how we might do a better job in this area?

SCHREYER

There has to be a total commitment of the entire university in all the departments of all the schools to make it successful. And it does have to start at the top. In our case it has. I cannot think of a greater goal than for a total commitment on the part of an entire university working with the business community.

PAYZANT

I think one of the dilemmas is that traditionally most people have agreed that one of the products, or outcomes, of education would be expertise of some kind—knowledge and the wherewithal to apply it. I think that's stood the test of time, but what I see is a dramatic change in that there no longer is the assumption that everybody comes into the work place with the same value system about human resources and about work. And in my conversations with a lot of people in the business community (I realize this is overly glib) they say to me, "Tom, send people to us who have a positive attitude about work." What they're really saying is "Send us workers with the old New England work ethic and a sense of responsibility, so that they don't unfairly use their sick leave, that they come to work on time. Then we'll take care of the technical training."

Well, the technical part of it, when you come right down to it, is probably the easier part for both of us—higher education and elementary/secondary education—to do. The value piece, the attitude toward work—all of those changes that are swirling around us—are much more difficult, and I'm not sure how we come to grips with all of that.

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QUESTION

GENE ALLEN, UNIVERSITY OF MINNESOTA. Shouldn't we as institutions be concerned, not only about the rewards for faculty and individuals, but about how our institutions are rewarded for what our faculty are doing?

RAWLINGS

I think the time has come for us to stop asking for credit for everything we do. It's part of the major underlying problem we face in this country. One of the best things about this conference is that it has focused on what we can do for people, rather than the other way around. One of the problems we face in higher education is that everywhere presidents go these days, we have our hands out asking for money. When we show up in Washington, D.C., it's to ask for money. People are tired of it. People see us as arrogant institutions that always want something and rarely talk about what we can give. I for one would like to see a few institutions try the approach that simply says, "Let's do it because it's a good thing to do, and it's badly needed in our states."

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DIALOGUE

JIM VOTRUBA, MICHIGAN STATE UNIVERSITY. The issues that we're talking about here—both building capacity and building a willingness among universities to engage those various publics— requires two levels of focus at our universities. The first has to do with a conceptual level or building the intellectual foundations for outreach, and that's got to begin with developing a clear relationship among outreach, teaching, and research. Often, these things get posed—if not explicitly, implicitly—as a zero sum game in which one is enhanced at the expense of the other. That's not the way to approach this issue successfully.

In addition to my responsibilities at Michigan State, I coordinate a project involving the Big Ten universities, plus the University of Chicago, in dealing with issues of multi-dimensional excellence. Given the multiple missions of our universities, how do we create institutional environments that support the full breadth of the mission? That set of discussions among very similar universities is leading to a clearer focus on the interaction between those various mission components. In fact, if we do it right and well, good outreach can enhance good research and good teaching. Each can feed the other. Universities have to look at themselves as learners as well as teachers, and communities can be teachers as well as learners. If we establish that relationship, we begin to pose the issue in the right way. If we talk about outreach at the expense of research, it isn't going to happen. Rather, talking about how each can drive and infuse and strengthen the other begins to create a language.

A second set of strategic issues has to do with faculty rewards, both at the individual and the unit level. David Ward, Chancellor of the University of Wisconsin-Madison, talks about "needing to unpack the service category." He urges us to focus on unit level incentives and rewards, developing a set of expectations for deans and chairs that suggests, without trying to manage the lives of individual faculty members, that there should be an expectation of the full range of the mission across a unit. How the unit does that is negotiated between a provost and a dean or a dean and a chair. But working across the full breadth of the mission is the place to begin. Funding is certainly an issue, not only because it drives the activity, but because it has a symbolic quality. Faculty members very quickly pick up the fact that if you don't reward it, then you don't fund it, hence, you don't value it. Despite all the rhetoric, if you don't fund it and you don't reward it, you don't value it. Encouraging interdisciplinary work is difficult, and it's formidable, and we won't address these complex issues without first breaking down some of those barriers.

Now those are institutional issues. At another strategic level, we have to focus on the life of individual faculty members. We have to get specific about the messages that we send the faculty when we're preparing them at the doctoral level, recruiting them, orienting them, socializing them, evaluating them, and the way we look at staff development, professional development across the lifespan. Often, the messages that we send are contrary to our rhetoric. We recruit faculty at Michigan State. We're

proud of being a land-grant university. Until four or five years ago, a faculty member could be recruited at Michigan State and never hear the words "land-grant," or not learn how to interact among those various mission components.

It seems that a rebalancing, or refocusing, institutional mission has a quality analogous to rationing down Division I athletics. If universities are negotiating the hiring of faculty and allowing new faculty to negotiate their way out of teaching for the first two years, and other kinds of things that encourage the focus on research and scholarship, some other university could be saying that we're going to recruit you, but we want you to be "multi-dimensionally excellent." We want you to be a fine teacher in the classroom and we're not going to let you negotiate your way out of teaching. We want you to be a powerful researcher, but we want your research to be grounded in the needs of communities and people. And we also want you to do outreach. There is going to be a great competition for the next generation of faculty, and I want to encourage institutions to get down and deal with these issues, both at the conceptual and strategic level. We have to figure out how you "walk the talk" and how to act on what we know is a serious problem that's going to affect our capacity to maintain public confidence and support over the next generation.

DECISION TRANSITION: REFLECTIVE EVALUATION

DECISION–TRANSITION: REFLECTIVE EVALUATION

Editor's Note: *One of the most striking aspects of the NELD program is its emphasis on, and approach to, evaluation. According to NELD evaluator Boyd Rossing, a strong evaluative component was built into the NELD program from the beginning, one that contributes to understanding, critiquing of the program, and furthering the growth and learning of NELD participants. This approach has helped to bring a fresh perspective to the role of evaluation in outreach/extension programs.*

Within the context of transformational learning, reflection and evaluation play important roles. Specifically, they serve as mirrors for awareness, greater understanding, and as important steps in the decision-transition phase. Reflection and evaluation took place during, and after, the Forum. For a sampling of reflections, we turned to those participants who, perhaps, best understand this context for reflection and evaluation, namely the NELD interns. For their inspiration, these interns used NELD National Coordinator Jerry Apps' famous Forum "five concepts" — reinvention; relationship; commitment; learning organization; and paradox — as a framework for their reflective evaluations.

REINVENTION

The Forum was important for top level administrators in the land-grant university system to come together and re-commit to outreach and to understand its necessity. The Forum needs to be followed-up. Organizational culture needs to be changed. New relationships need to be developed. We need fresh, exciting new ideas that will inspire people to act.

Lawrence Yee
County Director
University of California, CES

The need for revisiting and "reinventing" many of the core functions of the land-grant universities certainly hit at the heart of the need for change. To me this mandates a total reexamination of policies, structures, and the very core elements of the land-grant university. Perhaps the most paramount of these was the need to examine and change the structure for rewards in the university setting. Faculty must be committed to outreach and rewarded for it equally with their rewards for pure research and academic teaching.

A reinvention of the definition of education and learning may also be appropriate. A commitment to delivery of education through new methodologies, the concept of distance learning, and the role of technology in learning are all things that need to be encompassed in the policies of the land-grant university.

Mary Kaye Merwin
Associate Director
Cornell CES, Nassau Co.

It appears that one of the problems inherent in this question/approach is that we are stuck in our traditional paradigm in thinking that programs are products to be delivered. Hence, we find an issue and create deliverables. The philosophy undergirding the concept of program is the notion that program is not a collection of disparate activities, but a focused effort with goals, sequenced efforts, etc. But this is too narrow a conceptualization for the dynamic environment in which we live and work. Education is a process not a product. Could we think about a program as a prolonged engagement and our role as contributors, challengers, linkers, collaborators, etc. If we are truly

concerned about societal issues, we must let the citizenry own the program. They are the center and we are the contributors and supporters.

Sue Sadowske, Director
Tourism Research &
Resource Center
University of Wisconsin-
Extension

Overall, a university environment is needed that values a wider range of performance than is currently done. Elements of the environment include an appropriate reward structure, more flexible and discretionary funds, and better faculty preparation. According to Assistant Provost James Votruba of Michigan State University, a contemporary faculty member needs exposure to the merits of outreach in their doctoral programs and through recruitment and orientation activities.

A. Scott Reed
Program Leader
Oregon State University, CES

Universities have tremendous inertia. This Forum raised the recognition level of these issues and necessity of dealing with them. There must be some mechanisms to promote continued dialogue, or the energy generated at La Jolla dissipates back to business as usual. The dialogue must be at the President's level in order to get the urgency that it so desperately needs. The entire NELD program has been extremely timely because it represents a much broader thrust than CES has been willing to think about. The crises that so many universities are facing have really become a mixed blessing. Without crisis, it will always be business as usual.

Leadership must actively search for different perspectives and look well into the future. The traditional inertia associated with university discipline and function must continually be challenged in order to bring multi-discipline expertise to bear on societal issues. New structures may need to be invented in order to bring these people together and to reward them for successfully addressing these problems.

Larry Hudson
Extension Animal Scientist
Clemson University

RELATIONSHIP

Coalitions that bring together partnerships of business and industry with the public universities will be essential for maintaining a competitive place in our world marketplace and economy. While we may have hesitated to do this on a grand scale in the past, there have to be ways that can assure these partnerships for funding research, extension, and training without selling our souls.

Effective two-way communication and working relationships with business, industry, labor, urban centers, specific audiences, etc., will need to happen simultaneously on several fronts to be effective in the total system.

I believe that the Forum provided a stimulus for establishing some of the necessary dialogue that will serve as the forerunner of the needed coalitions for change within the land-grant universities. It's a bit too early to say the Forum provided the "jump start" for the process, but I would be hopeful that this is the case.

Mary Kaye Merwin
Associate Director
Cornell CES, Nassau Co.

A supporting tenet of this global perspective is transcending our myopic view of what universities do and what our boundaries are. A number of speakers called on public universities to become centrally involved in worker training/education and retraining. Typically this would be considered the purview of vocational education. But certainly we must have something to bring to the table. We may not be directly involved in worker training per se, *but we can find ways to collaborate in supporting initiatives that do, through our knowledge of adult education or maybe by helping communities that are wrestling with unemployment issues.*

Sue Sadowske, Director
Tourism Research &
Resource Center
University of Wisconsin-
Extension

In order for public universities to better fulfill outreach responsibilities, structure must be changed—away from a hierarchial, autonomous management mind set to one in which partnerships across the university, community, nation, and world are commonplace. "Partnerships" was the password at the Forum. Universities are beginning to embrace the outreach mission again. This comes with the realization that real success is the result of teamwork reaching beyond traditional internal and external boundaries.

Jane Schuchardt
National Program Leader
ES-USDA

This experience has shown me the need for all outreach organizations in a university to work together to provide a strong comprehensive program of continuing education. Leadership is needed to define mission and roles of each and coordinate efforts. Continued dialogues on university campuses are needed to overcome turf protection and find ways to mutually support each program. Model outreach programs need to be developed to provide examples of ways this can be done.

Sue Buck
Home Economics
Program Specialist
Oklahoma State University
CES

We must be willing to dialogue with community groups who have not benefited from the land-grant university, groups whose very voices are often silenced by a lack of opportunity and access to education and training. The great irony in this situation is that many of these groups can be found in rural areas and their values are as agrarian as the soil in which they toil. I am, of course, referring to Native Americans, the Hmong, migrant farmworkers and others. The Forum was extremely timely on many of these issues. I am, however, still wondering when we are going to listen to the desperate needs of these groups.

Juan Moreno, Director
Student Diversity Institute
University of Minnesota

COMMITMENT

One of the most fundamental necessities is the need for a change in attitude. That was referred to by several speakers and at different levels. The need to eliminate the "elitist" attitude of the universities hit at the heart of the matter. The need for this to start at the top and permeate the entire university was also salient to the need for change. Another way of getting at this same point was made in the plea for "commitment" to access, to society, and to the role of technology in teaching and learning. Yet another was inferred in the suggestion that the staff and the audiences of the university need to be much more diverse and representative of our society. It was also suggested strongly that the road must have two ways and must involve more dialogue with society at all levels.

I am struck with the need for "new blood" and radically different thinking individuals in leadership roles within the university if university outreach is to make the paradigm changes advocated in the Forum. I am also struck with the notion that leadership must change throughout the university, not just in that segment of the university labeled "outreach." It was also strongly suggested that there is a strong need for university leadership to come with significant experience in the dynamics of the world outside of academe.

Mary Kaye Merwin
Associate Director
Cornell CES, Nassau Co.

For land-grant institutions, the National Association of State Universities and Land-Grant Colleges will be key. The success of a continued presidential-level group will chart the future for all such units. Given, however, the increasingly diverse and collaborative efforts needed, another mechanism is needed to ensure ownership and commitment to a coordinated effort. This is perhaps best done on a state level. Truly effective outreach is indexed to locally-identified, processed, and prioritized needs.

A. Scott Reed
Program Leader
Oregon State Univ., CES

The Forum contributed to this thinking, indirectly, by the general absence of consideration for the basic extension model of client-directed non-formal education, problem-solving, and research. Also, there was little evidence of a view of the universities grounded in continuing change, environmental scanning, and futuring. To the extent that there was talk of real outreach (rather than just making sure our grads have the skills today's corporations need), much of the talk still had a quality of what can we do for them—with little sense of pursuing true community or shared leadership in shaping the future.

Duane Dale
DFD Consulting
Amherst, MA

The most effective type of leadership for enhanced outreach will begin in the office of the chief executive officer. Manifestation of such leadership will be carried out by one or more deputy administrators with a strong and committed faculty. The faculty needs better signals about their expectations. Public universites and especially land-grants, can more emphatically argue regarding their societal obligations. Private institutions will also engage in outreach for the benefits of public relations and support. Increased collaboration will ask individual institutions to sacrifice some visibility.

A. Scott Reed
Program Leader
Oregon State Univ., CES

LEARNING ORGANIZATION

The perspective of life-long learning is one of the first societal concerns that merits discussion. All aspects of our population are faced with learning continuously throughout life—career transitions; keeping up with the changing knowledge base; being able to function effectively in the community—all valid and expanding criteria for life-long learning. The role of the land-grant universities in life-long learning requires looking beyond the traditional boundaries of degree programs and classroom teaching—distance learning; self-directed learning; extended informal education; contractual learning; and the role of educating an informed voting citizenry all seem to need a much more prominent place in the thinking of the land-grant universities.

Mary Kaye Merwin
Associate Director
Cornell CES, Nassau Co.

The Forum showed me that institutional leadership is probably the single most-challenging area of redefining outreach programs at public universities. That was evident by the continued focus on issue based programs or issues in general. I believe that "quality of life" will be improved if society or individuals of society become lifelong learners. I also believe that learning is a process, not an issue. An issue (to me) is a series of events that one cannot change, manage, or lead. However, we can *change, manage and lead processes.*

Paul Gutierrez
Extension Economist /
Associate Professor
Colorado State University

Personally, I think that health care has to be one area that outreach can have some effect. Learning can still play an important part in this endeavor by helping people stay healthy. Other involvement may well deal with educating health care providers about a national health care system. I choose this single topic as important because I think it threatens the economic well-being of most Americans.

Byron Burnham
Associate Dean
Learning Resources Program
Utah State University

PARADOX

I believe quality of life is the key societal concern that merits new or expanded outreach by public universities, and that social, economic, and environmental issues and concerns are the driving forces. "Quality of life," however, presents a paradox—for the socially and economically disadvantaged quality of life may be as "simple" as three meals a day, a place to sleep, and some warm clothes. For others (the more advantaged), quality of life may relate to a "healthy" global environment. Clearly an expanded outreach agenda for quality of life of these two groups would be different, although the opportunities are seemingly endless for either of these two areas. The President's Forum made this paradox very clear to me. It also pointed out why, even though we are probably well-aware of this societal concern of "quality of life" and the issues that drive it, it is much easier for us to work with that which we are most comfortable as individuals and as organizations.

Paul Gutierrez
Extension Economist/
Associate Professor
Colorado State University

I feel that it is time to consider examining where our resources are going. If we are to stay a farmer support organization, then that will result in a cutback of funding and programs. However, those programs that were part of CES and are based on key societal issues will still need to be continued and supported, possibly through another federal agency partner. If this is the case, then CES will become just one element in the total outreach formula. Outreach funding for land-grants could come from EPA, HHS, USDA, wherever it seems most appropriate. CES has 100 years of history within the university infrastructure. This position should give us an edge in assuming leadership in the development and delivery of a broad range of outreach educational programs—not just those based on agricultural issues. I think that if we don't make the changes ourselves, we will be told to change, probably to the detriment of the extension system as a whole.

Kathleen Mallon, Director
Cooperative Extension
Education Center
University of Rhode Island

I'm convinced that enhanced response to society's concerns is an issue for universities. People clearly experience problems that are difficult to anticipate. Higher education seems to value more basic approaches to discovery of knowledge (basic research) that, by its nature, is longer term and less flexible than opportunistic short-term responses. Universities tend to be limited by fixed commitments to tenured faculties with agendas that do not provide for responsive, problem-solving programs.

A. Scott Reed
Program Leader
Oregon State Univ., CES

The universities have tremendous pressure to perform well and to look good to their various constituencies. Getting those constituencies to move, together, to a new vision of the public universities is a tremendous challenge that will require leaders skilled at participatory leadership and vision-building. Some opportunities for that style of leadership and that degree of change will appear, but more often the opportunities will have to be chiseled out of hard rock.

Duane Dale
DFD Consulting
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ACTION: MODEL OUTREACH PROGRAMS

(A BRIEF SAMPLING)

NELD

Since its inception, NELD, the National Extension Leadership Development Program, has challenged individuals to consider how leadership must change in concert with the "Next Age" — a world of constant and discontinuous change. The three-year pilot program began in 1990 as a joint venture of the Cooperative Extension System, the University of Wisconsin- Extension, and the W. K. Kellogg Foundation. One of its hallmarks has been an intensive internship program in which NELD interns participated in two years of personal and professional development through self-directed learning activities and a series of four leadership seminars.

As framed by NELD, "Next Age" leadership development centers on four themes: developing an individual leadership philosophy; renewing and changing organizations; living diversity; and understanding international implications. The themes translate into seminars in the NELD Intern program and the seminars translate into changes in personal and professional lives. The seminars are based on a model of transformative learning and use experiential approaches to education. Public higher education, sagging under budget shearing and calls for heightened accountability and relevance, has been especially receptive to the demand for "next age" leadership.

Jim Cowan, for example, has had his personal leadership philosophy "transformed" as a result of his NELD internship. A Product Group Manager at AT&T in New Jersey, Cowan, along with other NELD interns, lived with a family in the rural Alabama Black Belt as part of his NELD experience. He vividly recalls conversations with his Alabama hosts about the loss of their Black school system and of

seeing the problems created by desegregation as he felt rain dripping through the leaky school roof and heard the teacher's frustrations as they talked of constraints.

In his job, Cowan now strives to see situations through his co-worker's eyes and to better understand how their histories, cultures, and families have affected their perspectives and actions. Moreover, he and his AT&T colleagues — Joann Donlin, Paula Goldstein, Dick Niles, Naidu Pothuri and Linda Roberts — are collaborating with Rita Wood of Rutgers University. All NELD interns, these New Jersey partners are seeking ways they can build a public/private sector collaboration. Currently, both AT&T and Rutgers are offering in-house leadership development programs. The first step in building the bridge toward future partnerships is the idea that each organization should send their emerging leaders to *both* developmental programs.

The Intern program is but one of the three "legs" of NELD, the others being a series of workshops for Directors and Administrators in Extension and the Presidents' Invitational Forum on Outreach. The 70 NELD interns will not only help Extension to meet the challenges of "Next Age" leadership, they are Extension's "Next Age" leaders.

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Editor's Note: Information provided by Judith Adrian, NELD Outreach Specialist

CORNELL UNIVERSITY'S YOUTH AND WORK PROGRAM

"About half of American high school students do not go on to college but 'flounder' for what may be years in 'dead-end' jobs," says Stephen F. Hamilton, professor of human development and family studies and director of the Cornell Youth and Work Program, the only university research-based youth apprenticeship program in the country.

"At the same time, industries cry out about a 'skills crisis' in the workforce," he continues. "That's because the United States is the only industrialized power lacking a comprehensive school-to-work transition system. We believe the solution is for some 16- and 17-year-olds to spend less time in school and more time on a job with trained workers, learning job and academic skills in apprenticeships."

Hamilton's Youth and Work Program, now in its second full year, involves 40 high school students working 10 to 20 hours weekly in supervised paid work in manufacturing and engineering, administration and office technology, or health care, all in Broome County. The collaborative effort also involves Cornell Cooperative Extension of Broome County, five local schools, and four area employers.

Erica Anderson, a senior from Union-Endicott High School, is an apprentice at Wilson Hospital and plans to study nursing at Broome Community College. In an article for a newsletter, she wrote: "I feel I am more prepared and more knowledgeable than any of my friends preparing for college. I work in a real hospital, with real patients and real employees. I have hands-on experience in drawing blood, working with a physical therapist and working on computers."

In order for apprenticeship projects like Cornell's to succeed, says Hamilton, they need an institutional base and linkage to all the institutions where the apprentices spend time, including school, the workplace, and

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the family. Without strong communication among these "institutions," and without strong support from the broader community (including the private sector, schools, and labor), projects such as Broome County's cannot be successful.

"Companies are bombarded with applicants who are ill prepared for the ever-changing work world. They may have mastered the basics of certain subjects, but they have never applied them," says Heidi Browne, vice president of human resources at The Raymond Corp., which participates in this apprenticeship outreach effort.

"The apprentice program offers them this opportunity. It also gives them the chance to learn to work collaboratively with others. Developing good teamwork skills is an important feature of the program."

Ideally, the students will continue to work while attending two years of community college. At graduation, the students not only will have a high school diploma and an associate's degree, but also expert job skills in the occupational area of their choice.

The demonstration project, funded by the New York State Legislature, the Pew Charitable Trusts, the Charles Stewart Mott Foundation and the Dr. G. Clifford and Florence B. Decker Foundation, involves students from Binghamton, Greene, Susquehanna Valley, Union-Endicott, Whitney Point and Windsor high schools. Participating employers include Anitec, a division of International Paper Corporation; IBM; Lourdes Hospital and United Health Services Hospitals; The Raymond Corporation and Security Mutual Life Insurance Co. of New York.

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Editor's Note: This information is based on an article by Susan Lang for Cornell Chronicle. (3/18/93)

CES NATIONAL CENTER FOR DIVERSITY

The Cooperative Extension System's (CES) National Center for Diversity emerged from a powerful vision based on Extension's commitment to diversity, the ability and initiative of land-grant institutions to partner in a unique fashion, and CES' responsiveness to a national need. The vision guided the creation of the CES National Center for Diversity and provided further purpose, direction, and focus for the value of diversity.

The most significant aspect of the Center has been the development of a unique partnership to advance Extension's commitment. The Kentucky State University Cooperative Extension Program, the University of Wisconsin-Extension, and the Extension Service - U.S. Department of Agriculture (ES-USDA), collaborated as founding partners and have made significant monetary and in-kind contributions toward the Center's establishment. The Extension Committee on Organization and Policy (ECOP) has also endorsed the effort. The uniqueness of the partnership also illustrates the first occasion on which ES-USDA, 1890 and 1862 land-grant institutions have partnered to advance a national mission. The method of partnership is a model for other ES-USDA Centers for Action as they establish partnering arrangements.

Kentucky State University was designated as lead institution for several reasons. The Extension Administrator provided aggressive leadership in developing a partnership and committing resources, including use of a new Cooperative Extension facility for the Center. Moreover, Kentucky State University, as an 1890 land-grant institution, possesses unique experiences and contributions to lend to advancing diversity.

According to Dr. Joanne Bankston, Center director, the mission of the National Center for Diversity is "to provide leading edge, quality education, training and implementation support to enhance diversity and pluralism in Cooperative Extension."

"The Center has been established to accomplish several specific objectives," she continues, "that include providing training and development; serving as a recruitment and retention consultant; developing a set of diversity programs; and providing a resource inventory. CES diversity training will be facilitated through two Center diversity training and development specialists as well as a resource inventory provided through a database — PENpages at Penn State University and other electronic highway resources."

Dr. Bankston adds that in a very short time the CES Center has hired staff, established the database, identified a small group of Center Associates, drafted a diversity curriculum, and provided diversity resource materials and information to individuals, groups, and organizations, both internal and external to Cooperative Extension.

"Diversity is, perhaps, the biggest challenge confronting institutions today," concludes Dr. Bankston. "By establishing the CES National Center for Diversity, land-grant institutions are affirming their commitment to becoming pluralistic organizations that embrace diversity in their programs, work force, audiences, mission, and vision."

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PENNTAP

To help the nation's small- and medium- sized manufacturing businesses regain their competitive edge, 23 state governments and more than 100 universities have established technology transfer, industrial extension, and business assistance programs. PENNTAP, the Pennsylvania Technical Assistance Program, is a striking example of a collaborative industrial technology extension program that works.

Doug Tharp, PENNTAP Southeastern Pennsylvania Regional technical specialist (right) works with Richard Lee of Quantum Geophysics, Inc. The services of PENNTAP staff are confidential and provided at no cost to the clients.

A partnership among the Pennsylvania Department of Commerce, the U. S. Economic Development Administration, and Penn State University, PENNTAP is designed to strengthen the Pennsylvania economy by providing scientific and technological assistance to the state's business and industry. According to Jack Gido, PENNTAP director, the program's primary focus is "on helping small- and medium-sized manufacturing companies improve their global competitiveness."

"Pennsylvania has nearly 15,000 manufacturing companies that employ 100 or fewer employees," explains Gido. "Most of these establishments do not have the in-house expertise, or the time, to resolve specific technical problems that may hamper their economic competitiveness. Our technical specialists assist these firms with first-hand technical expertise, locating and providing useful technical information, relevant referrals, and linkages to other economic development assistance providers."

As a result of PENNTAP assistance, one Pennsylvania manufacturer was able to reduce its waste by 18 barrels per year while another saved over $70,000 in fabrication and installation methods.

"PENNTAP is a successful model for industrial extension programs across the nation," concludes Gido, a claim substantiated by the program's 27-year track record and its receipt of the Technology Transfer Society's Justin Morrill Award in 1991.

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MINNESOTA OUTREACH COUNCIL

As the University of Minnesota identifies its vision for the future and outlines the action steps appropriate to that vision, it is considering how the outreach function will be fulfilled. Realizing that successful and meaningful outreach will depend on the institution's ability to adapt to changing societal needs and to manage diminishing resources, a major strategic planning initiative underway at the University is defining outreach as a major function of the University's mission. "A strategic plan for outreach will clarify and direct our internal operations in outreach and increase awareness external to the University," explains U of M President Nils Hasselmo.

To lead the process of strategic thinking and planning for outreach, President Hasselmo appointed a nine member Outreach Council in April, 1992. The challenge before the Outreach Council was ambitious and complex. Outreach Council chair, Vice President C. Eugene Allen, stated that, "strategic planning for outreach is an iterative process. It informs the overall strategic plan for the institution and it will, in turn, be modified and fine tuned as the larger plan is brought forth."

The Outreach Council's report to President Hasselmo is a blueprint for bringing outreach into the 21st Century at a research and land-grant university. To date, the work of the Council has produced a number of important outcomes. For example, in the early months of its activity, the Outreach Council listened intently to what others—both inside and outside the university—had to say about outreach. One Minnesota State Senator observed that it was important to him that university faculty connect their work with the issues of the state. Several university deans expressed their concern that currently there is no strong incentive to do outreach and that the faculty reward system is weighted heavily toward research and teaching. Other faculty members explained that there are outreach opportunities at the interface of society and the institution for every U of M department and college.

Additional Outreach Council recommendations included:

- A new taxonomy for planning and reporting outreach which is centered around emerging societal conditions and trends and the intended desired outcomes for society. The taxonomy will be a useful tool as academic units work across departmental boundaries. It will also help to provide consistent language for telling the Univer-

sity of Minnesota outreach story both inside and outside the institution.

- A new "outreach consciousness" emerged as the council worked on definition, meaning, and vision for outreach. While faculty workload and reward issues continue to generate controversy, there is a heightened recognition of the importance of outreach, alongside, and integrated with, teaching and research.
- Strategic issues, goals and action steps were identified by the Outreach Council in six major themes, including: 1) integration of outreach with teaching and research; 2) leadership responsibility for outreach; 3) organizational models for delivery of outreach; 4) collaboration and partnerships with those outside the University; 5) evaluation, rewards and incentives for outreach; and 6) telling the outreach story and securing resources for outreach.

The University of Minnesota's work is far from complete. Indeed, many of the most difficult choices about structure and resources lie ahead. The energy for that challenge has, however, been generated by the Outreach Council's first year in existence. In the words of one University of Minnesota Regent: "By forming the Outreach council and asking for new emphasis on outreach, this University is bringing the land-grant mission up-to-date with the condition and challenges of present and future society."

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Editor's Note: This infomation is provided by Steve Laursen, Minnesota Extension Service.

AREA HEALTH EDUCATION CENTERS

If, as University of North Carolina-Chapel Hill Chancellor Paul Hardin points out (see Forum Presentations—Health), the ideal university program would not distinguish among teaching, research, and extension, then the UNC Area Health Education Centers Program (AHEC) is indeed an *ideal* university program.

AHEC's uniqueness stems from the way education in medicine, dentistry, pharmacy, public health, and nursing is "exported" to centers of primary health care throughout North Carolina. Advanced medical students, interns, and residents go out into these centers to gain practical experience in their chosen professions. This experience is gained under the supervision of permanent faculty in the AHEC centers, as well as faculty who reside in Chapel Hill but go out to the centers for this special teaching and patient care function.

In addition to conducting community-based programs for students and residents, AHEC is a major provider of continuing education and clinical consultation services in small towns. And its library and information service network is linked to the four AHEC health sciences libraries and to each of the small hospitals, health departments, and mental health centers.

Perhaps most importantly, the AHEC Program exposes students and residents to community practice. It shows them how to bring the academic process to underserved rural and inner city residents, making it more likely that communities can recruit and retain needed practitioners while also keeping them up-to-date.

Dr. Jane McCaleb, medical director of North Carolina's Rural Health Group, a consortium of health clinics and a geriatric health center serving North Carolina's Halifax and

Northampton counties, spends about 30 percent of her time teaching medical students and interns in AHEC-sponsored programs. "It forces me to keep up," admits Dr. McCaleb, "and I think teaching is the best thing I can do to help more people get into family medicine. I also think AHEC has helped stabilize many rural practices in our area with their continuing education programs and technical support."

AHEC carries out its mission through nine centers, each of which covers several North Carolina counties. Each center is directed by a community hospital or non-profit foundation and is linked via computer to all the other AHEC libraries and learning resource centers.

Richard Sparks, president of the Watauga Medical Center in Boone, North Carolina, is grateful for this AHEC access. "For me, professionally, AHEC allows access to an enormous amount of databases and information that I need to make decisions," says Sparks. "I think the community as a whole benefits from the information in the AHEC library — everyone can use it, from high school or Appalachian State students to physicians who are doing high level research. We stress education here and AHEC fits right in."

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MICHIGAN STATE ENVIRONMENTAL OUTREACH

The demand for universities to increase their outreach efforts in the area of natural resources and environmental management is greater than ever before. According to the presenters at the NELD Presidents' Forum, society is moving from an area of resource abundance to one of resource scarcity; from pollution intervention to pollution prevention; from property rights to property rights and responsibilities; and from resource decision-making by individual owners in isolation to decision-making with increasing public involvement.

One concise expression of the universities' new resource management role can be found in the Cooperative Extension System's recent mission statement—"To enable people to make informed decisions about the quality and productivity of life-sustaining natural resources and environmental systems"—for a nationwide program in Natural Resources and Environmental Management. This mission, based on the principles of education and citizenship, was developed in response to trends and conditions in society and the mandate of the 1990 Farm Bill, which called on the Cooperative Extension System nationwide to "develop a comprehensive environmental education program for land owners, users, public officials, the general public and youth." The mission is being put into action through innovative outreach programming at universities around the country.

The Provost's Outreach Committee at Michigan State University (MSU), for example, has defined environmental outreach as "a form of scholarship that focuses on the needs of external audiences and cuts across all university functions—research, teaching and service." MSU's Beaver Island project demonstrates how outreach can enrich students' educational experience, while at the same time extending knowledge to external audiences and enhancing the quality of the outreach effort of the university. Dr. Cynthia Fridgen, extension specialist in the MSU Department of Resource Development, observed that, "It is an example of what can be done if problem identification is done by stakeholders and the options for change are developed by a multidisciplinary team of faculty and students."

The Beaver Island project is a long term study of changes in energy usage, environmental quality, and economic viability in a small rural community. A master plan was developed with input from residents and students at Michigan State University. Classes in the MSU departments of Landscape Architecture and Resource Development

exposed students to the intricacies of participatory community planning.

Dr. Fridgen says the project is more than just a study because it will enable the community to change its energy use and expand its options for future growth. "In the process," she adds, "the University is learning a lot and creating models for future work with communities interested in planning for their own sustainable development."

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Editor's Note: This infomation is provided by Steve Laursen, Minnesota Extension Service.

EPILOGUE

NELD & THE ART OF WHITE WATER RAFTING

by Dr. C. Peter Magrath
President, National Association of State Universities and Land-Grant Colleges

Each of us will write their own postscript to the National Presidents' Invitational Forum. But surely all of our epilogues will have at least one point in common: that what transpired in La Jolla is just one part of a process that is engaging public higher education at almost every level. We are no longer passively observing that the world has changed or is changing -- we too are engaged in change — at the personal, professional, and institutional level.

This is, indeed, a good sign. It not only demonstrates that we are capable of change, but that we are willing to challenge our beliefs and our traditions; we are prepared to take risks; we are ready to forge new alliances; and, perhaps most important, we are secure enough to question the relevance of our outreach and extension mission. With this degree of committed involvement, I am confident that public higher education will remain relevant and meet the challenge of change in the next century just before us.

The NELD program deserves some of the credit for the positive changes underway. It has played a catalytic role in Cooperative Extension and at state and land-grant universities. NELD has created an environment where we and our colleagues have felt comfortable to discuss change, challenge, risk, and, yes, even fear. Moreover, Dr. Jerry Apps and his NELD colleagues have provided us with a process within which these changes can be evaluated and understood, where we can, at the individual and institutional level, address these changes. And, perhaps most important, NELD has given us a cadre of change agents — Tomorrow's Leaders — who will help Extension and outreach keep about the business of change and growth.

To be sure, there is a great deal of activity in our universities that is unaffected by NELD and the Presidents' Forum. But I think my NASULGC colleagues and fellow Forum participants would agree that NELD has helped to move the change agenda along much more swiftly and effectively.

I'm reminded of a passage from Robert Theobald's book *The Rapids of Change* where he writes: "We are being swept

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downstream by a torrent of change. It challenges us at every level. It destroys the validity of traditional patterns of behavior. We have shifted into these rapids without noticing them, but in reality the white water around all of us makes it urgent that we discover how to respond."

I thank NELD and the National Presidents' Invitational Forum on Outreach for the ride on the rapids. My NASULGC colleagues and I are moving toward the white water. It will be fun, exciting, and significant. Join us.

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La Jolla, California
February 28 to March 2, 1993

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